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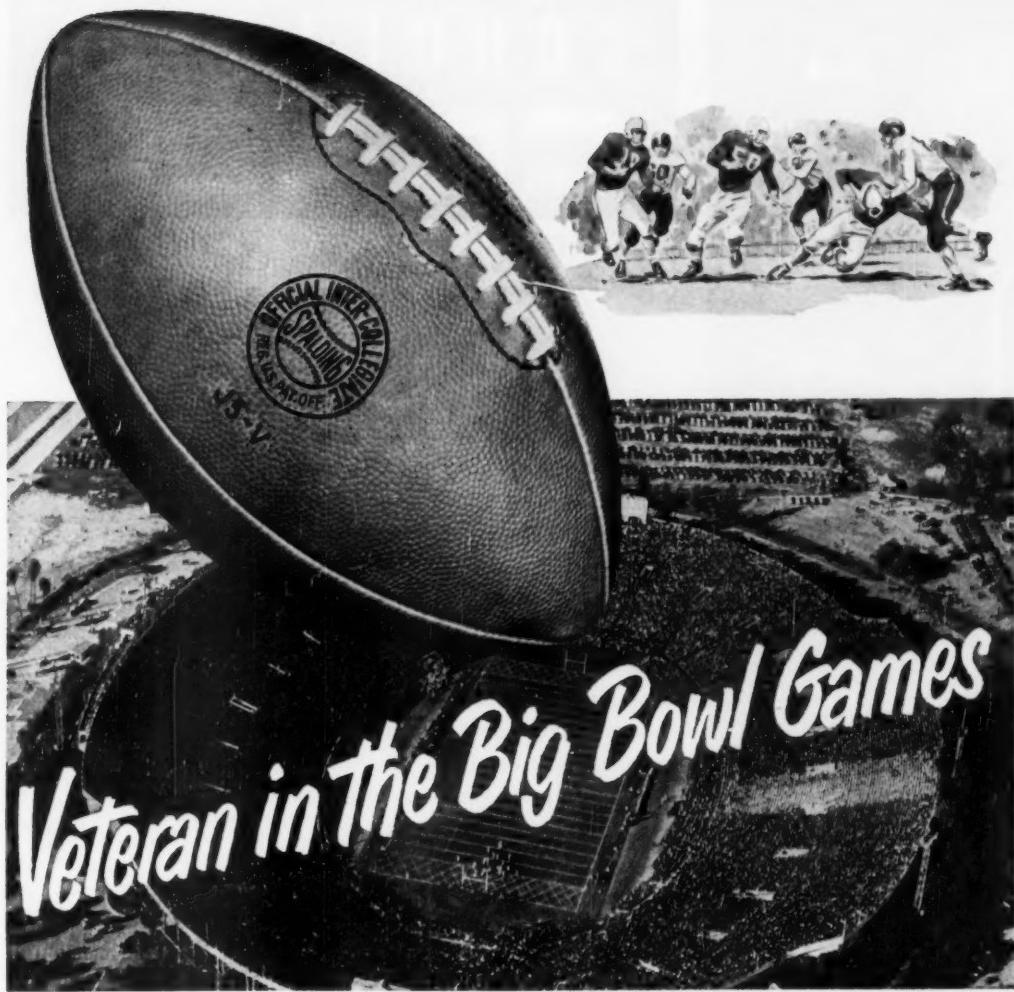


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VOLUME 20 • NUMBER 5 • JANUARY

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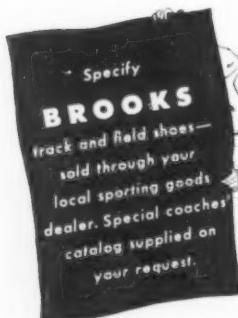


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A Phog out of Kansas

NY time life becomes a little boring in your neck of the woods, just put in a call for Dr. Forrest C. Allen, the commander-in-chief of the Kansas dribblers.

Nobody can do a better job of jolting the ennui out of a neighborhood. Life may not become more beautiful, but it certainly will become more stimulating.

Ask anybody in the vicinity of Madison Square Garden. When the pheocious Phog blew into town last month, the basketball season had been moving along serenely and uneventfully. Within 24 hours, every coach and writer were screaming from the roof-tops.

In his first public pronunciamento, Mr. Allen clarioned:

1. The Big Ten and Pacific Coast conferences sold the center jump down the river. The abolition of the jump was supposed to have nullified the effect of the big man. It hasn't. And now the officials can't possibly control a game in which the players are always dashing wildly all over the floor.

2. Raise the baskets to 12 feet and rotate the center jump like a baseball batting order, with the men who are to take turns jumping designated before the game.

3. Fouls are too cheap. Why should the offended team face the loss of possession after a free throw? That's why Kansas always waives one-shot fouls, preferring to take the ball out and try for two points. Let the offended team always keep possession whether or not the throw is made, and watch foulng cease. Then you wouldn't have to disqualify players after a set number of fouls, to discourage rough play.

4. Eastern basketball is dirtier than its Western counterpart because it stems from the old pro game. The old pro graduates now coaching in the East place more stress on sharpness—"keener practices in which the crime lies in getting caught." They are teaching

their boys to nudge, push, elbow, hook, etc.

You can imagine how this went over with an old pro like Nat Holman. Upon hearing Mr. Allen utter these infamous words, the most original of the old Original Celtics leaped to his feet and shouted, "Unmitigated hooey!"

Another Eastern mastermind tartly remarked that "Judging by Phog's historical ramblings, he must have been coaching the game before it was invented."

NEEDLESS to say, everybody turned out to see Phog's touted team take on puissant St. John's. They wanted to see the "new Mikan"—6-9, 245-pound Clyde Lovelette—and how the Kansas scheme of waiving all one-shot fouls actually worked.

They certainly got an eyeful. St. John's, realizing it could never cope with Lovelette on a straight man-to-man basis, threw the defensive book at Kansas. They kept switching from one type of zone to another. One minute it was a 1-2-2, next minute a 2-2-1, then a 1-3-1.

When the Jayhawks started hitting from outside, St. John's switched to variations of the man-to-man defense—all-court press, collapsing man-to-man, and infrequently, straight man-to-man.

Whatever the defense, however, it was always adhesively tight. Knowing that Kansas would waive its fouls, St. John's had orders to throw caution to the winds and get in close. The result, as you'd expect, was mayhem.

It seemed to us that both sides were to blame. While Kansas's practice of waiving fouls was certainly within the letter of the rules, it violated the spirit of the code and encouraged defensive foulng.

As long as you have a deep bench, what have you to lose by playing the ball excessively close? You might lose a couple of players on

fouls, but you will demoralize the other club.

This is predicated, of course, on the assumption that you can prevent the opponents from cashing in on their waived fouls. This, St. John's was able to do, and the strategy—as reprehensible as it may seem—worked.

At any rate, with 40 seconds to go, Kansas was trailing by a single point. A foul was then called against St. John's. Everybody expected Kansas to take the shot. But Allen crossed 'em up by waiving the foul.

After taking the ball out, the Jayhawks moved it around coolly until a player worked himself open for a set shot. The ball hit the rim, caromed off—and was tipped in by Lovelette! That was the ball game.

AFTER the game, Allen further endeared himself to his Eastern brethren by asserting that St. John's had played like a "pack of alley cats."

Ungracious as this avouchment was, it was not entirely unjustified. Though St. John's did a beautiful job of badgering the Jayhawks all over the court, they were extremely unmindful of how they did it. They hooked, hacked, held, and hipped.

Some of these fouls were palpably deliberate, yet the officials didn't make a single two-shot call for flagrant foulng. It wasn't that the tooting was biased. The trouble stemmed from a universal officiating affliction—a timidity in calling deliberate fouls. And that's the only antidote for frenetic defensive play.

Though Kansas, from a sartorial viewpoint, looked like something out of Currier & Ives, dressed as they were in knee-length stockings and knee guards, there was nothing old-fashioned about their game.

Allen hasn't let the grass grow under his sneakers. His team's fast break, ball-handling, defense, and offense all bear the impress of superb coaching.

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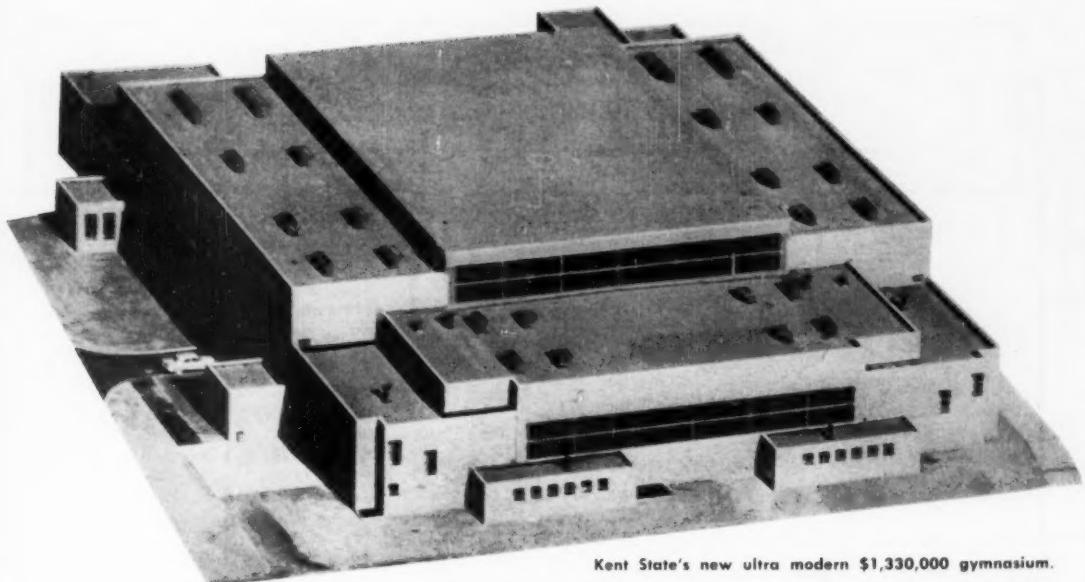
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IT'S WILSON TODAY IN SPORTS EQUIPMENT



Kent State's new ultra modern \$1,330,000 gymnasium.

De Luxe Physical Ed Plant

THE new men's physical education building at Kent State University in Kent, Ohio, is a monument to the belief that health and physical education plays a vital role in modern American college life.

Dedicated early last month, the \$1,330,000 structure is not only the largest college gymnasium in Ohio but one of the finest in the entire Midwest. A combination building, it houses the activities of the health and physical education department, the intramural program, and varsity athletics.

The new plant replaces Wills gymnasium, built 25 years ago. At the time, the Wills gym was regarded as one of the finest plants in Ohio. It remained adequate until the post-war period, when enrollment soared over the 6,200 mark.

It was then that President George A. Bowman and other KSU officials discovered that Wills gym was undoubtedly the busiest place on the campus.

True, the gym could accommodate 4,500 for basketball games; and it had a large pool, ample floor space, and average locker rooms, offices, and a wrestling room. But a health and physical education staff of 22

instructors, a 10-sport varsity athletic schedule, and a 17-sport intramural program deluged the gym daily from 8 A.M. to nearly midnight, even with limited offerings.

There was but one solution—a new, modern plant.

The new building is an immense structure, designed to serve the needs of a growing institution in the state's most heavily populated area, where nearly 4,000,000 people reside within a 50-mile radius of the campus.

In the new gym's main arena, some 10,000 people can be accommodated comfortably in 7,000 permanent seats—4,000 in the balconies and 3,000 on folding stands. Another 3,000 can be seated in bleachers for special events.

The main court measures 114 by 176 feet, and provides a regulation basketball floor and three cross-courts. The maple floor is lined for tennis, volleyball, and badminton, with special fittings for gymnastic equipment.

A six-lane Olympic-size swim-

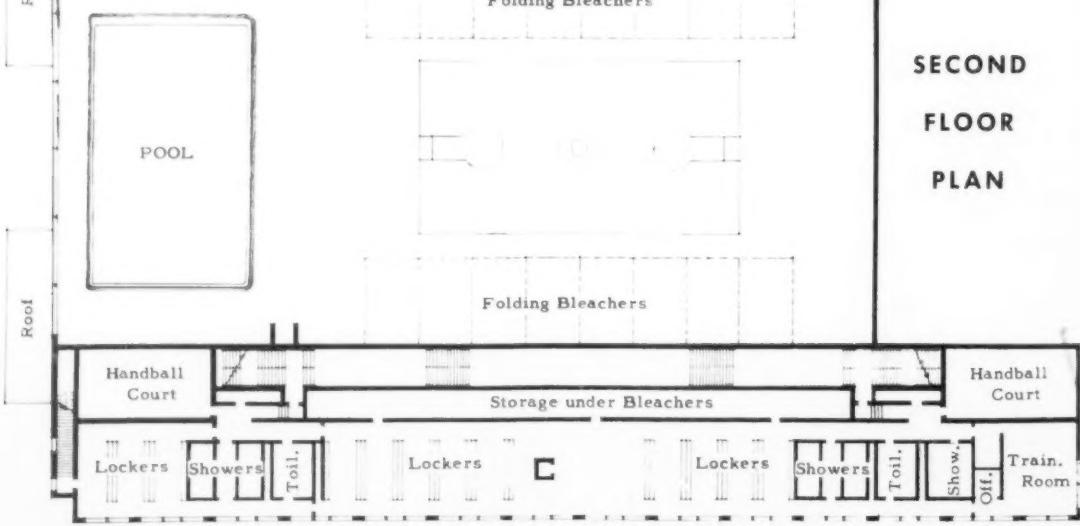
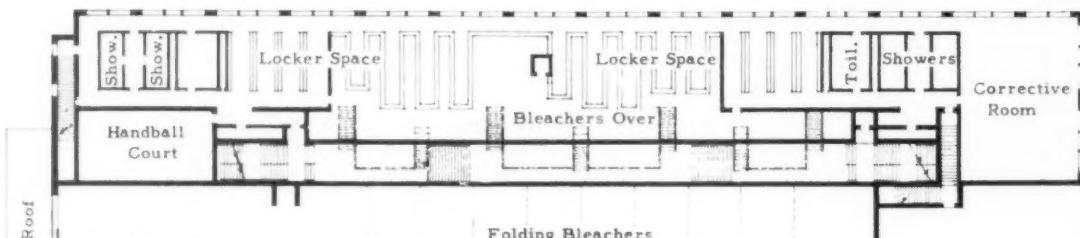
ming pool, measuring 46 by 75 feet, is separated from the main court by electrically-operated doors. For swimming meets, the doors are opened and as many as eight sections of the folding seats may be rolled to the edge of the pool to provide seating for 1,000 spectators.

Also on the main floor are four spacious lobbies, each with ticket offices, rest rooms, and telephone booths, offices for varsity athletics, a lecture room, and equipment room.

Opposite are two more lecture rooms, offices for physical education, a receiving room, intramural room, dressing room for instructors, and two shower rooms and an office beside the pool.

Upstairs may be found the locker and shower rooms for KSU varsity squads and visiting teams, a training room and office, coaches' dressing room, three regulation handball courts, each measuring 20 by 40 by 20 feet, four shower rooms, a corrective gym, locker rooms for physical education classes, toilets and storage room.

By **MICHAEL RADOCK**
Public Relations, Kent State U.



The outside measurements are 322 by 233 feet, with the building covering about an acre and a half of the campus. The height of the gym is 54 feet, with a 36-foot height from the floor to the roof girders. The greatest truss span is 176 feet, and there are no roof supports to obstruct the view in the main court. The movable partition measures 24½ by 114 feet.

From the viewpoint of Professor Frank E. Ballenger, head of the health and physical education department, and Trevor Rees, director of athletics, one of the most welcome features of the building is the locker space.

Some 3,286 lockers of various sizes are provided. They include:

- (a) 2,268 box lockers, each 12 by 21 inches and open at the back so that an attendant may remove gym clothes for laundering;
- (b) 264 lockers, each 9 by 18 by 72 inches;
- (c) 116 lockers, each 9 by 18 by 36 inches;
- (d) 43 lockers, each 12 by 18 by 60 inches;
- (e) 153 lockers, each 18 by 18 by 72 inches; and
- (f) 242 lockers, each 18 by 18 by 36 inches.

Heating is provided by the University's central heating plant with 14 "airblanket" heaters for ventilating and heating. Emergency lighting is furnished by an automatic standby gasoline-type engine using propane fuel.

The new physical education center is located adjacent to Kent State's new Memorial Stadium. Also recently constructed in the current expansion program are two regulation athletic fields on two sides of the men's gym. These will be used for intramural and practice purposes.

In his dedicatory address, Dr. Delbert Oberteuffer, chairman of men's physical education at Ohio State University, termed the new gym a "laboratory for human personalities."

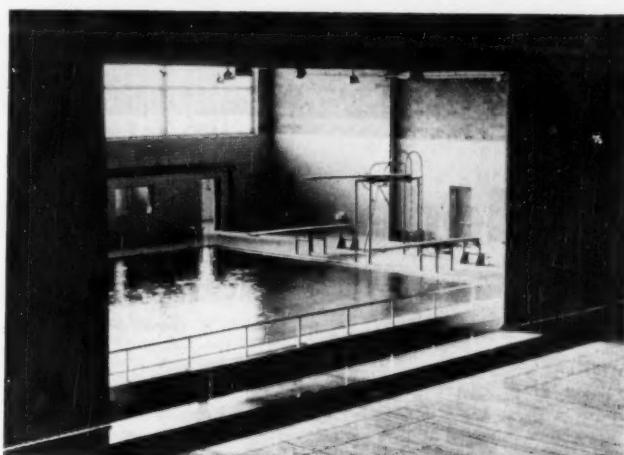
"We consider this building to be another laboratory on this campus," Dr. Oberteuffer declared. "Only in this laboratory the materials worked with are human personalities, and human development rather than chemical changes is the end in view."

Referring to the future use of the new structure, Dr. Oberteuffer said that the truly educative physical education program provides five important experiences for its students. It develops a respect for human personality, cultivates a sense of morality, deepens the sense of objectivity,

(Concluded on page 50)



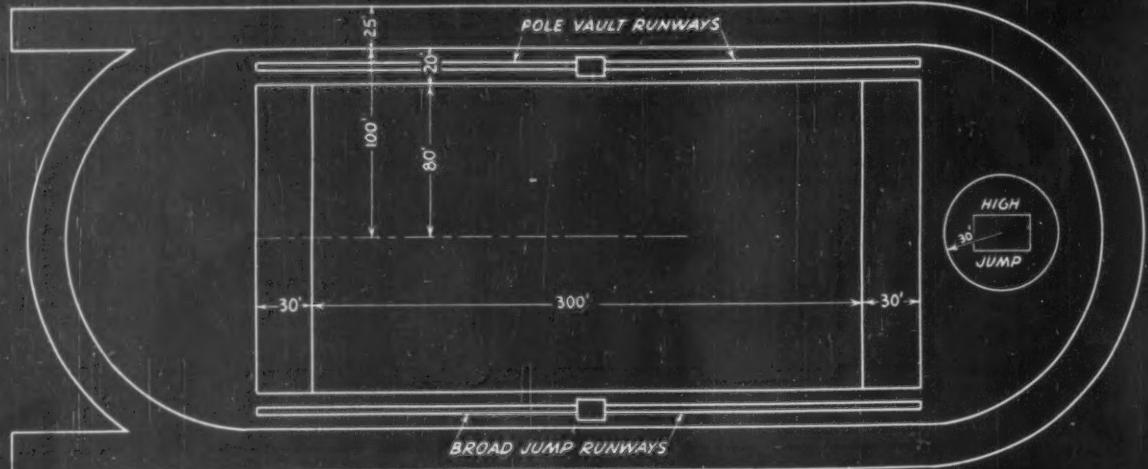
Over-all view of gym; the "wall" at left is a moving partition.



The moving partition partly open, showing the adjacent pool.



Close-up view of the ultra modern, fully equipped training room.



Modern Stadium Design

THE St. Joseph (Mich.) High School track team will flash its spikes over a new cinder track this spring. When the city erected Dickinson Stadium last summer, it decided to discard the well-worn cinder path at Wells Field and include more modern and adequate track facilities at the site of the new stadium.

School officials invited Dr. Lloyd Olds of Michigan Normal College, assistant coach of the 1948 Olympic Team, to be the consultant on the track. Under his guidance, careful planning has provided the high school with one of the finest schoolboy tracks in the nation.

It is a north-south track with two chutes and a 220-yard straightaway. The straightaway is on the east side of the stadium, with the chute at the south end. The entire track, including the straightaway, is 25 feet in width, permitting seven 42-inch lanes.

The curb is concrete reinforced with steel. It is six inches wide at the top and 18 inches deep, with an expansion joint every 50 feet. The outside curb is higher than the inside curb to permit a one-tenth fall from the outside to the inside for drainage purposes.

By LEON BURGOYNE
Coach, St. Joseph (Mich.) High School

Sandy sub-soil furnishes excellent natural drainage. But in addition to this, there is a catch basin every 50 feet around the inside curb. These catch basins are constructed of cement block and brick. A metal manhole cover permits easy access into the basins, which are large enough to work in when cleaning becomes necessary.

An eight-inch tile drain around the inside circumference of the track connects the catch basins with an 18-inch storm sewer, which runs across the football field at the 50-yard line.

A high water table under the west straightaway necessitated the use of an additional eight-inch tile drain down the center of the track four feet below the finished grade.

The finished surface of the track comes within two inches of the top of the curb and is level with the drainage vents.

A feature of the track is its experiment in rough fill. Instead of the usual crushed limestone, the track is using industrial slag for its base.

Pulverized foundry slag was spread over the sandy sub-soil of the track to a depth of seven inches. The top five inches of the track is a mixture of locomotive cinders, ground to one-eighth inch size, and clay loam. A hammer mill mixed the cinders and loam to an exact ratio of 2 to 1.

Both the slag layer and the cinder-loam layer were applied in the same manner. A chip spreader put down the layer and a maintainer followed it up, bringing the layer up to survey level. Then a road roller went over it and packed it down.

The experiment with slag fill is noteworthy on two counts. First, the slag will not compact to the usual hardness found in so many tracks after a few years of use. Numerous cases of shin splints result when the base of a track becomes hard, but the St. Joseph track will eliminate this hazard if the slag fill lives up to expectations.

Secondly, the slag will afford good drainage. Officials expect the track to be as fast as those using crushed limestone as a base.

The pole-vault pit is located at the 50-yard line between the gridiron and the inside curb on the west side. It is 12 by 14 feet, and has two 150-



foot runways leading into it—one from the south and one from the north.

The broad-jump pit is five by 14 feet, and is situated at the 50-yard line on the east side of the field. It also has two 150-foot approaches.

The High-jump pit is 10 by 14 feet, and lies in the center of a large circular approach at the north end of the field between the end of the gridiron and the curb.

All of the approaches are of the same material as the surface of the track, one-eighth inch cinders and clay loam in the ratio of 2 to 1.

Lighting for the football field was installed with sufficient flexibility to provide for night track and field meets. Six 80-foot steel poles carry sixteen 1500-watt lamps each. With minor adjustments, the lights perfectly illuminate the track.

An excellent public address system serves the track as well as the entire stadium. The press box on top of the west stand contains a separate room for public address equipment and personnel. Three outlets on the field provide for phones and microphones, so that assistants may relay prompt information to the press box and loud speakers.

THE press box in the new Dickinson Stadium at St. Joseph, Mich., possesses many noteworthy features of particular interest to schools contemplating similar construction.

Designed by the late architect, Robert V. Knox, the press box rests on top of the west stand. This stand is backed with concrete block, faced with blond brick, to the roof level of the dressing rooms.

At the center of the stand, and over the west entrance, the block and brick continue up to a height of 44 ft. 5 in. and form the back of the press box.

The inside dimensions of the box are 31 ft. 4 in. by 8 ft. There are two floor levels so that the actual reporters seated at the 10-inch writing shelf, which runs the length of the box, will not be hindered by visiting coaches and officials seated behind them.

The raised level also permits clear vision over the heads of the press representatives and spotters.

The front of the box is made of glass, and consists of seven windows, each 5 ft. in height and 4 ft. 6 in. in width. Two corner windows, 5 ft. by 3 ft. 1 in., increase the field of vision. The windows are of aluminum sash, and the upper half of all of them will open outward.

The box has an overhang of 4 ft. 6 in. over a storage room directly under it. Folding chairs from box seats are stored in this space between games. Access to the press box is by means of a stairway through this storage area.

The press box is divided into three separate booths. The one for

radio personnel is L-shaped, 9 ft. by 8 ft., and is located at the north end of the box. The largest booth—for press, spotters, and electric-scoreboard attendants—is 18 ft. by 8 ft. and occupies the center portion of the box.

At the south end of the box is a separate booth, 4 ft. 6 in. by 8 ft., for the public address equipment, announcer and spotter. Partitions with windows separate the three booths.

The roof of the press box is flat with a slight slope to allow for drainage. It is 32 ft. 8 in. by 12 ft. 5 in., and has an overhang of 4 ft. 5 in. over the front of the box.

Used as a photographic deck, it is a four-ply roof over two-inch planking and is topped with tar and gravel. An inch and a half pipe railing surrounds the deck. Access is through a 30-inch square scuttle and by means of a stairway inside the press box.

Reynolds corrugated aluminum siding covers the front of the press box and the storage room under it. The inside of the box is lined with celotex.

Edward Zick, science teacher at St. Joseph High School and licensed by the F. C. C., designed the public address and electrical hook-up of the press box. He and his very active high school radio club did the greater share of the installation of lines and equipment.

(Continued on page 54)



By FRED COLLINS
and CORNELIA L. BREEN

Physical Ed. Dept., Utica (N. Y.) Free Academy

Ideal Facilities,



MANY of you will probably recall the article on "Utica's Dream Gym" in the January 1949 issue of *Scholastic Coach*. Since this article appeared, many people from all over the U. S. and even foreign countries have been entreating us for further information not only about the gym but about the program being housed in it.

They want to know what features we like best and what changes we would make if we had to do it over again. They also want to know about storage space, apparatus, the program, number of pupils, size of staff, size of classes, and many other details.

Though every program is an individual affair hinging on facilities, geography, available funds, etc., a great deal of practical information can be gleaned from the Utica set-up.

Our program is housed in a gym 135 ft. by 93 ft., which, thanks to folding type bleachers, possesses an overall seating capacity of 2,200.

This main gym may be divided into three separate gyms by large, electrically operated doors. Each of these areas, used for class periods, is 93 ft. by 48 ft.

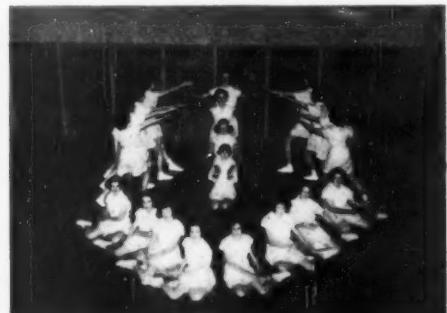
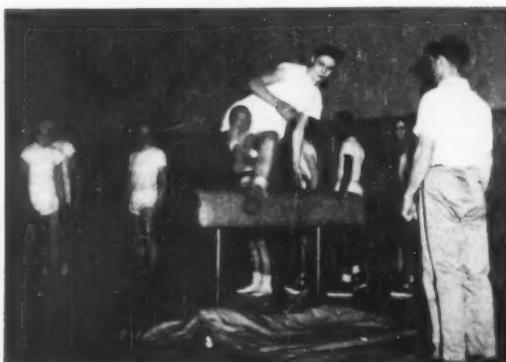
Our student body numbers 1,975, with a few more boys than girls. The school day consists of eight 40-minute periods. The boys use one gym all day and the girls another.

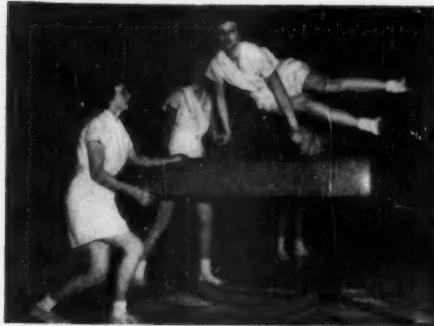
That leaves the middle gym, as we call it, open for a divided program. The girls use it during the morning classes, while the boys take it over in the afternoon. In other words, we run three classes simultaneously.

Handling these classes is a staff of six—three men and three women. Each student is assigned to two gym classes a week; thus, our classes run between 45-50 students each.

In the locker room, each student is assigned both a small locker and a long locker, which he uses during a class period.

The gym uniform is kept in the short locker. For the girls, this consists of a one-piece yellow suit. For the boys, it is white shorts, T shirt, and sneakers.





Ideal Program

The long locker holds the student's books and school clothes during class. A padlock is kept on the short locker and is transferred to the long locker after the student dresses for class.

Each student pays a small fee to cover the cost of clean towels for each class and of the blanket insurance under the New York State Athletic Protection Plan.

The students are scheduled by grade level as nearly as possible.

Now for an idea of how we run our 40-week indoor program. The indoor set-up is stressed because, unfortunately, we have no outdoor facilities for classwork. In the fall and the spring, we use the available public parks for our after-school program.

One of the main objectives of our girls' program is to teach them not only how to participate in activities but to be intelligent and interested spectators.

With this in mind, we have our coaches take over the first two classes in the fall. They give the girls a brief resume of football rules,

plays, and officiating to improve their understanding of the game. This brush-up has proved most enlightening and beneficial to the girls.

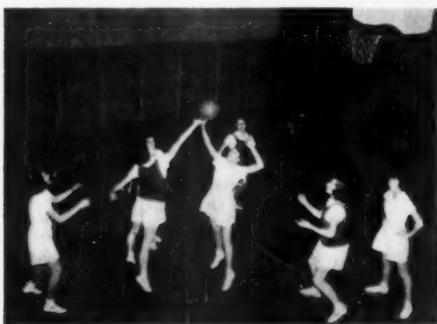
We try as much as possible to have our class activities coincide with our after-school program. Hence, our next activity is divided, with the freshmen and sophomores receiving instruction on soccer while the juniors and seniors are having field hockey.

This way all the groups may enjoy an intramural program in these activities without taking up any of the after-school time on learning the techniques.

Following the team sport unit comes a dance section. This also is graded, with the freshmen and sophomores having folk, juniors having tap, and the seniors rhythms and modern, with stress on original composition.

Once the football season is over, everyone immediately starts think-

(Continued on page 60)





introduces
the

RING CLEAT

**...THE MOST IMPORTANT IMPROVEMENT IN
FOOTBALL SHOES IN THE HISTORY OF THE GAME!**

Exclusive on MacGregor Goldsmith Football Shoes

This revolutionary new engineering achievement in football shoes—exclusive with MacGregor Goldsmith—insures players of *better getaway, better pivoting, and surer stops.* It provides equal or more traction than ordinary cleats, reduces injuries, and provides more comfort.

These are the tremendous advantages to be gained from the new MacGregor Goldsmith RING CLEAT, as proved by extensive tests.

This great invention consists of a lightweight aluminum alloy cleat, which is placed on the sole of the shoe directly beneath the ball of the foot, with the center of curvature at the center of the ring cleat. This engineering principle, developed for MacGregor Goldsmith at Cornell Aeronautical Laboratory, Inc., Buffalo, provides an axis of rotation through the ball of the foot.

As a result, the player can pivot freely and without losing traction.

The ring cleat brings the player down off "stilts," and gives him a broad platform of stability with unfailing traction in all directions. Being able to pivot easily as he runs or is hit, the player is not so frequently subject to injury to ankles, knees, and hips which results when ordinary conical cleats "lock" in the ground. This prevents the most common of all injuries. These cleats are safer for other players because they have no sharp edges and will not break or splinter.

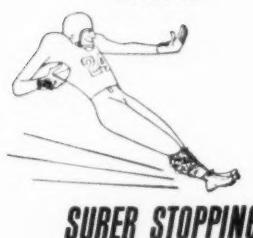
Outfit your squad with the new No. A77RC, Kangaroo Uppers, or No. A44RC, "Spartan" Leather Uppers, MacGregor Goldsmith Football Shoe. Reduce injuries and give your players the advantage of *better getaway, better pivoting, and surer stops.*



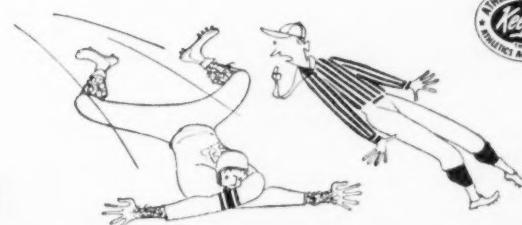
MACGREGOR GOLDSMITH INC.

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SURER STOPPING



Reconditioning and Care of Athletic Equipment

THE reconditioning of athletic equipment has been developed by highly trained specialists to enable schools and colleges to have all their gear cleaned, sterilized, repaired, and ready for use the next playing season.

While this reconditioning service doesn't necessarily eliminate or reduce the need for purchasing new equipment, it does assure the school of getting the most out of the equipment they do have.

Located throughout the country are a number of reconditioning firms who do this sort of work. There are two ways of processing your athletic equipment. The best method is to have a representative of the reconditioning company call on your school and look over the equipment.

The larger reconditioning services have trained specialists who will recommend what can and what cannot be done with the equipment, and will give an estimate for the job.

The second method is to send the equipment right on to the reconditioner's plant, where it will be checked and the same information sent you.

Though practically every piece of equipment used in football, basketball, baseball, soccer, track, and hockey can be reconditioned, it's impossible for the coach or athletic director to determine exactly what can or cannot be repaired.

If he has a representative of the reconditioning company inspect his equipment, this agent will perform the service for him. If, on the other

hand, he sends his equipment to the plant, the reconditioner will process the equipment and reject any articles beyond reconditioning.

In preparing equipment for the reconditioner, it is extremely helpful to assort the equipment and stack it into piles. This makes it easy for the reconditioner to check.

Laces in good enough condition to be used the following season may be removed from pants, shoulder pads, and shoes. A great many schools remove the good laces and pair up the equipment, using short pieces of old laces. It's always a good idea to pair up the shoes and keep the shoulder pads together.

If the cleats on shoes are in good shape, they should be removed before sending in the shoes. Chin straps of the snap variety should also be removed and kept for spares, since new ones will be installed by the reconditioner.

The time required for reconditioning depends more or less upon the date that the school wants the equipment returned. It may take from one day to a week or two to complete various orders, but the average reconditioner will make certain that the equipment is returned on the stipulated date.

The equipment should be sent to the reconditioner immediately following each sport season. At this time, the equipment is already sorted and very often is wet with water, mud, and perspiration.

By Larry D. Thompson



Equipment in this condition has top priority, and is immediately cleaned to eliminate the running of colors, shrinkage, and damage caused by perspiration.

Another good reason for sending in the equipment at this time is the lack of storage space prevalent in most schools. The wise coach will get his equipment out of the way so that he can quickly start his next sport.

In choosing a reconditioner, it's important to know more than the name and address of the company. The reconditioner should be able to furnish proof that he can perform the services required to reconvert the equipment into first class condition.

The equipment should be insured by the reconditioner from the time it is picked up at the school until it is returned; and the reconditioner should have ample financial background to reimburse the school for any damages or losses not covered by this insurance.

He should also be able to prove his answers to any questions posed to him, so that the school authorities can send in the equipment with full assurance that it will be returned in perfect condition on the desired date.

School authorities should be extremely careful about sending their gear to any reconditioner who cannot answer their questions, and they should be guaranteed that the reconditioner possesses the necessary knowledge, plant, facilities, and insurance to perform the required services.

The most important phase of the equipment problem is its proper care during the playing season. A (Continued on page 44)

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SB—Professional shoe. Standard spike, split shank. Yellowback Kangaroo.



RB—Professional shoe with split spike, straight shank. Yellowback Kangaroo.



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Specialists in Finer Athletic
Equipment for Head and Foot!

By DARRELL SIFFORD
Jefferson City, Missouri

Baseball Batting Tee

SINCE the beginning of baseball, players have been frantically searching for the magic formula to successful batting. In the final analysis, the result of their experiments can be summed up in just one word—practice.

Probably the most difficult of all the athletic arts to master, batting involves a delicate timing, good eyesight, and a strong pair of wrists. Since few athletes are blessed with all these assets, the only way they can become skillful batters is by diligent practice and a burning desire to excel.

Have you ever wondered why most boys are better fielders than hitters? It is simply because it is much easier to get fielding practice than it is to get someone to throw balls to them.

This problem has plagued our youngsters for some time, but at last an answer has been found. In this era of neon-lighted foul poles and automatic pitchers, it seems strange that such a relatively simple invention as the batting tee should come to their rescue.

The idea for the baseball batting tee was probably borrowed from the kicking tee in football or the golf tee. Fundamentally, all three are the same. Their purpose is to hold the ball in such a position so as to facilitate the striking of it.

The baseball tee has been used for several years in the major leagues, but few people are aware of it. Occasionally a picture of a batter swinging at a teed-up ball appears in a newspaper. But outside of this, there is little mention of it.

However, anyone who has been fortunate enough to use a batting tee will instantly realize the tremendous possibilities that this sturdy little device possesses.

For the benefit of those who are not acquainted with the tee, a description of it might be inserted here. The tee is constructed of strong flexible rubber and resembles a broomstick set in a Christmas-tree stand. On the top of the tubular structure is a depression in which the ball rests.

The height at which the ball can be placed is variable because the tee

is completely adjustable to any height within the strike zone. The aim of the batter is, of course, to meet the ball solidly without hitting the tee.

The values of the tee are numerous and easy to see. In addition to giving the batter practice on hitting balls at various heights, it teaches him to hit the ball out in front of him. No less an authority than George Kell, American League batting champion in 1949, has said that this is the most important single phase in batting. Every good hitter meets the ball well out in front of the plate.

Now, you may ask, where can I get a batting tee? Are they available at stores? No, batting tees have never been manufactured in sufficient quantities to warrant their sale.

However, don't become discouraged. You can build your own tee at home in less than two hours and for a cost of only a little over a dollar. The finished product will be just as sturdy and efficient as an original.

Obtain two one-by-four-inch boards about 18 inches long, which will serve as the sides for the tee. These boards should be placed upright on a base so that they form right angles to the latter. (Any type base may be used, such as a Christmas-tree stand.)

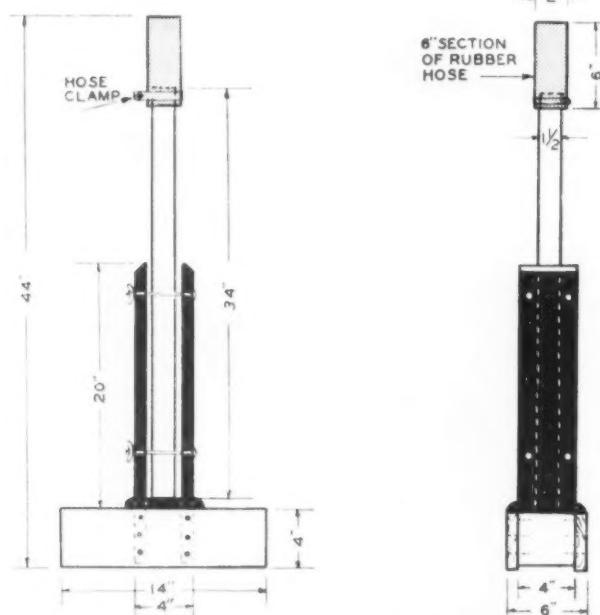
Fasten the sides to the base so that the four-inch surfaces are parallel, with a space of one and one-fourth inches between the two. Halfway up the sides insert two three-sixteenths by three inch bolts one and one-fourth inches apart.

Near the top of the sides place two more such fasteners. (All four bolts should have wing nuts on them so that they may be tightened by hand.)

The actual structure of the tee is now completed. There is a slot formed by the space between the two sides. In this space is inserted the rod-like stick from which the ball is actually hit.

For best results, a round piece of wood one inch in diameter should be used. However, a broomstick may be substituted. Of necessity there must be two such sticks, one for balls below the waist and the other for higher pitches. The former should be

(Concluded on page 45)



Blueprints of a home-made tee; total cost is a little over \$1.

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11	RED
12	BLUE
13	WHITE

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After laundering, comfortable Wigwams are ready to be issued in a hurry — with all the speed with which you tell white from green, and red from blue!

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A \$50 WHIRLPOOL BATH

By RICHARD PAGE
Athletic Director, Ithaca, Mich.

COLLEGE coaches and trainers have long recognized the value of the whirlpool bath in caring for the injured athlete. An exceptionally useful device, the whirlpool bath loosens stiff joints and tissues, drains infections, and promotes healing.

Unfortunately, this device has not generally been available to the high school athlete. Thanks to its rather steep price, only the most affluent of schools have been able to afford it.

Where the budget permits, a school will do well to purchase a ready-made whirlpool bath from a reliable manufacturer. Where money is scarce, however, the school may build its own. A good home-made device may be constructed for less than \$50.

The idea occurred to me during a visit to Michigan State College, where Jack Hepinstall, Spartan trainer, graciously permitted me to bring a boy for whirlpool treatment. I became sold on the benefits of the bath, and thought it was a shame that every high school athlete couldn't be offered the same treatment.

That's when the idea came—why couldn't this equipment be constructed and made available for daily use in our own high school athletic plant?

Within a few days' time, I was able to collect the necessary parts and, in collaboration with Olin Teachout, shop instructor, to build and put in operation a whirlpool bath to meet our needs.

We obtained the following parts:

1/4 h.p. single phase electric motor	\$13.95
1/2 inch centrifugal pump (696 gallons per hour)	15.75
100 gallon Butler Water Tank (galvanized)	16.78
25-foot garden hose with nozzle	3.45
	\$49.93

We connected six feet of hose to a hot-water supply tank and six feet to a cold-water line, enabling us to get a mixture of any desired temperature. To operate the device, we fill the tank to the desired water level and then secure the rotation of the water by means of the motor and

pump, which are connected by a four-inch single step pulley.

One length of hose sucks the water out of the tank into the pump, while another shoots the water from the pump back into the tank. The whirling motion is obtained by means of the nozzle on the end of this hose.

We removed the outside of the nozzle and drilled a hole in the end of the core to make it act as a reducer. This gives a very strong whirling motion to the water when directed against the curve of the tank.

The bath is large enough for a person to sit in, thus permitting treatment of any part of the body. Since putting the bath into operation, we have benefited by having several injured athletes return to competition with no appreciable loss of playing time.

Quite a valuable piece of equipment to have for an outlay of less than \$50!

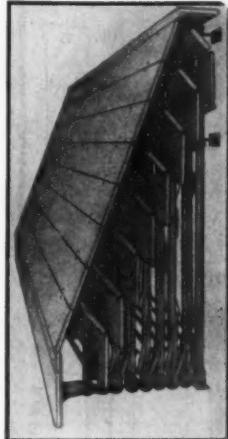
OPERATION OF MACHINE

A precautionary word may be in order on the operation of the apparatus. The patient himself should never be permitted to operate any machine that conducts heat or cold. Practically no high school student is acquainted with the temperature limits to which the body tissues may safely be subjected, and thus may inflict harm to themselves.

In short, the responsibility for administering physical therapy should be entrusted only to members of the school staff who are qualified.

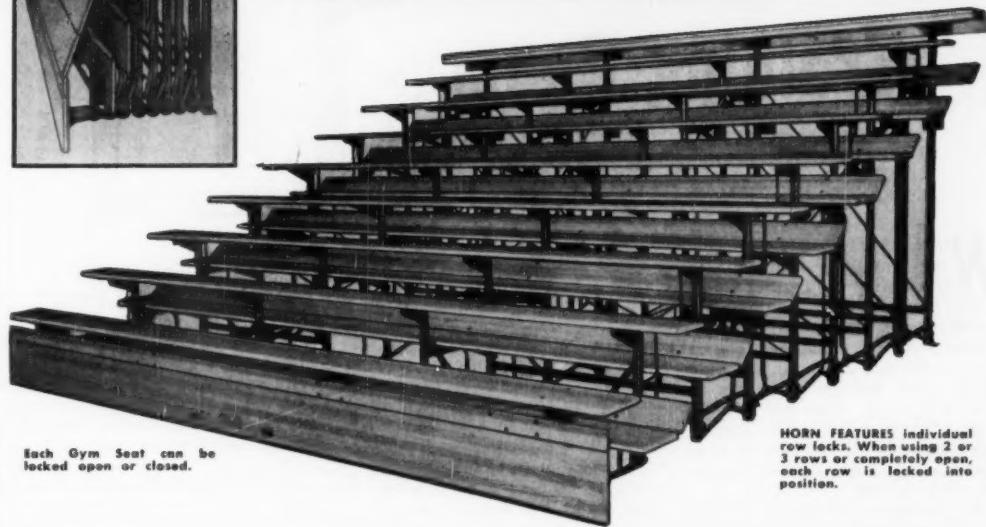
As Dr. Thorndike points out in his excellent text, *Athletic Injuries*, "The success of physical therapeutic agents depends on a well-trained personnel with a good working knowledge of anatomy and an understanding of the simple pathological and physiological changes involved in injury and repair."

"The safe operation of electrical and hydrotherapeutic apparatus requires both practical training and a special study in physics."



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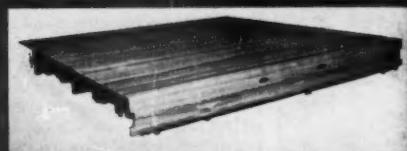


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Your Own Training Room

By LOU THOM HOWARD
McBurney Branch YMCA, N.Y.C.

"**W**OULD I like to have a training room like that for my boys!" How many high school coaches have said this upon viewing the training room of one of the local colleges and universities!

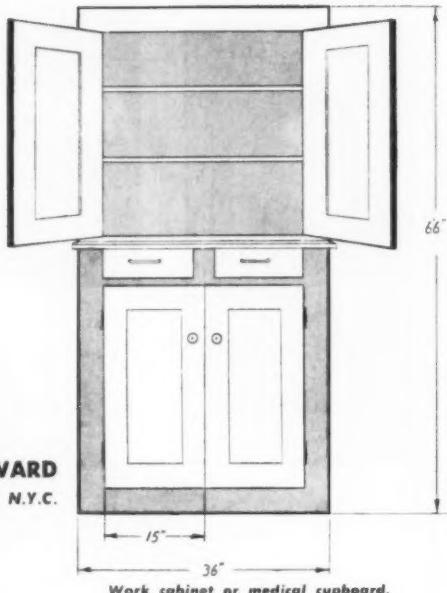
If you are one of the unfortunate coaches who, because of budget or other difficulties, does not have a training room, take heart. There's hope for you . . . if you're willing to expend a little time, a little energy, and a little money.

The first and most important step is to find a vacant room, no matter how small. Don't overlook that corner room piled high with excess equipment and other odds and ends. It might be ideal, and that debris probably should have been thrown out years ago.

Recruit a handful of willing students from your gym class to clean and paint the area. If they won't settle for a season pass, you might have to pay them a small fee. Go ahead, it's worth it.

The floor of the training room, if concrete, should be painted tan or grey. Paint the walls a very light color and be sure to use a waterproof paint. It is always wise to use colors that reveal dirt. If the room has to be cleaned frequently, so much the better.

All floor plugs should be set in a few feet off the floor. Remember,



Work cabinet or medical cupboard.

they're easily short-circuited and this makes cleaning hazardous.

Equipment offers no challenge if you have a cooperative industrial arts department. Plinths (rub-down tables) and medical cupboards may be made as class projects. Detailed plans for these two items are shown in the accompanying diagrams.*

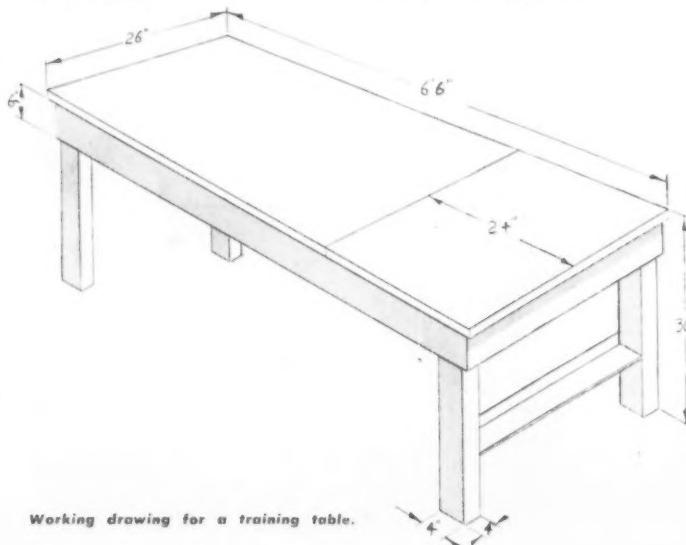
The one piece of equipment conspicuously absent in most high school training rooms is the whirlpool bath. Even if you do not possess the wherewithal to purchase this valuable device, you need not have to do without it.

A whirlpool bath may be constructed quite cheaply either by your industrial arts department or by the local tinsmith. The low outlay will amaze you. Complete instructions are offered in the diagram on page 24. (Also see page 20.)

Other training room equipment such as electrical heat units, scales, etc., may be purchased locally at standard prices. A washbowl with hot and cold running water is, of course, imperative. Hot water is essential for the whirlpool bath, for hot-towel immersion, and for simple sanitary purposes.

Anatomical wall charts have proven very useful in the training room. The athlete gains a better insight into his injury where the trainer shows him the bones or muscles that are affected and explains the nature of the injury to him.

*All diagrams used in this article appear by special permission of the Cramer Chemical Co., Gardner, Kan., and may be found in *A Training Room Manual*.



Working drawing for a training table.



"Seal-O-San®

must be used on the (University of Kentucky)
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*SEAL-O-SAN the choice
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Year after year the list of satisfied users
grows . . . many coaches, like Mr. Rupp,
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COACH RUPP knows what makes the best playing surface from long experience. He says: "I specified that Seal-O-San must be used on the floor (of the new Kentucky Fieldhouse), in spite of the fact that almost every other floor finish company has been here asking me to give them a chance to put their product on the floor. I have refused to do so." Here he advises Seal-O-San for every school gym floor: "I have endorsed Seal-O-San hundreds of times every winter in letters to school asking me to recommend the best (floor finish)."

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Much attention should also be given to signs. A few areas of concern might be as follows:

1. This is your room . . . Keep it clean!
2. No undressing in training room.
3. Shower before being treated for minor cuts and scratches.
4. No horseplay allowed.
5. Remove spikes or cleats before entering.
6. Watch your language!

The trainer's equipment is extensive and varied. There are, however, certain essentials that must be included, among which are the following:

Adhesive tape,	Tweezers
1", 1½", 2"	Pliers
Adhesive tape remover	Needles
Band aids	Safety pins
Ankle wraps and	Towels
rewrapping machine	Ice bag
Tourniquets	Analgesic balm
Gauze bandage,	Benzoin compound
24 x 10 yd. rolls	Green soap
Elastic bandage	Smelling salts
Absorbent cotton	"Hot stuff"

Wood applicators
Scissors
Sterile gauze
Felt
Sponge rubber

Athletic powder
Rubdown liniment
Salt tablets
Firm grip

You will notice that such items as aspirin tablets, laxative tablets, codine, hyperdermic needle and syringe, to name a few, have been omitted. This is because of the thin line drawn by some states in regard to the medical code.

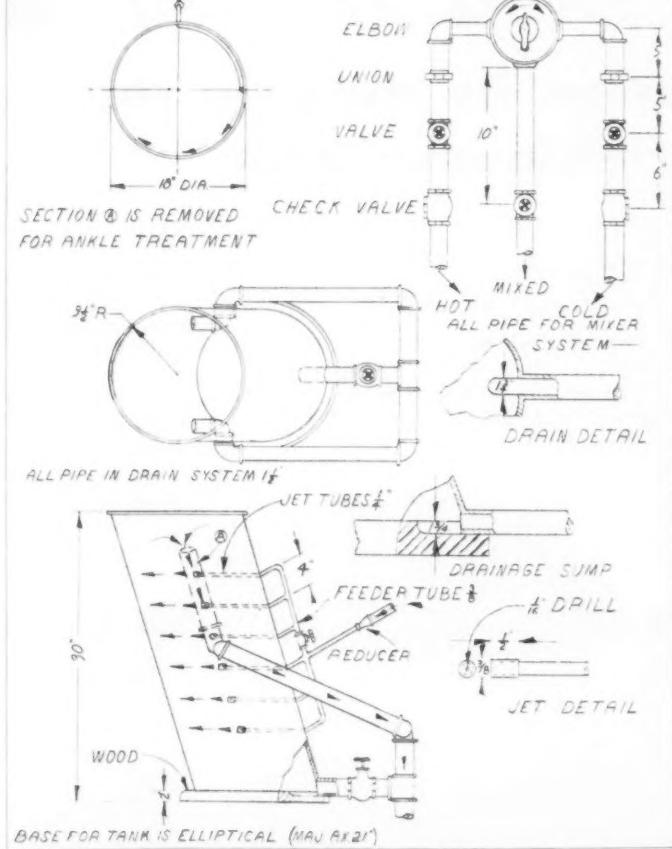
We recommend nothing stronger than salt tablets in the high school training room. Many other items may be added by the college trainer, since he has a medical doctor on the scene daily to furnish professional advice.

However, as a safeguard to the coach, we would suggest that he keep his shelves clear of all medicine and drugs as such.

Now that your physical education department has a fully equipped training room, the next problem

(Concluded on page 57)

POWER'S THERMOSTATIC MIXER



Terrific for FAST RELIEF of Stiff, Aching Muscles!

says **FRANK WIECHEC**,

Trainer of Philadelphia's baseball
Phillies and football Eagles.

"I'll go along with my boys in saying that Surin sure takes the kinks out of stiff, aching muscles and joints in double-quick time! Those moving parts see plenty of action—and when the game's over, there's lots of room for relief. And that's where Surin fits like a fielder's glove!"

WE USE AND HIGHLY RECOMMEND

Surin

SURIN is McKesson's amazing new double-action ointment that speeds relief from sore, stiff muscles, aches, sprains and strains—at the point of pain! SURIN (1) contains the modern research drug, Methacholine—one of the most powerful vasodilators known to science—which increases local blood circulation—fast. (2) Applied at the point of pain, it allows faster penetration of the relaxing agents,

camphor and menthol, and analgesic methyl salicylate. This combination is truly a 2-way attack on aches and pains that results in penetrating, soothing relief—often lasting for hours!

COACHES—TRAINERS!

Write for a free full-size jar of SURIN and descriptive literature!

SURIN IS SO EASY TO USE!

A 1-minute gentle "rub-in" is a great convincer. Feel that quick, penetrating warmth as tight knots of pain loosen up and yield to wonderful, relaxing relief! SURIN is pleasant to use. Smooth, creamy-white, greaseless, stainless. Harmless to clothing. Washes off easily in warm water!

**GET DOUBLE-ACTION
PAIN RELIEF—
GET**

Surin



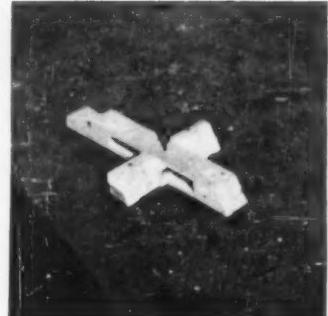
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High Jumping Standard



Hurdle in the Low Position



Simplified Starting Block

Home-Made Track Gear

By JAMES R. KUECHLER
Center H. S., Kansas City, Mo.

WHEN was it last necessary for you to overhaul your track equipment? Are you still using the antiquated pole vault and high jump standards which necessitate adjusting the pegs in order to change the height? Are you still digging starting holes in your track because starting blocks are too expensive? We were until the past year.

"Operation Overhaul" began shortly before the track season. Two things prompted this action. One was the deplorable condition of our track equipment, and the second was the awarding of the conference track meet to our school.

On taking inventory, we found that we were in dire need of hurdles, high jump and pole vault standards, a shot-put toe-board, and starting blocks. Almost a complete lay-out.

Making track pay for itself is a problem not faced solely by small schools. Even among the larger institutions, track has long been known as the "white elephant" of school athletics. Replacing equipment for the track "parasite" while carrying on a football and basketball program, brings out the best in athletic budgeteers.

Purchasing this equipment, we found, would be too great a strain on the athletic budget, and yet we were in dire need of the equipment for the forthcoming season. We turned to our school shop for help. Fortunately we were endowed with an excellent shop and an interested shop teacher, and they came through nobly.

Other small schools who find

themselves in the same predicament can easily do likewise.

Hurdles. The first project taken on by the shop was the construction of hurdles. A great expense was saved in making our own. The only cost incurred was for the purchase of outdoor wood, bolts and nuts, and paint. The hurdles were turned out on a production basis by the high school boys in the shop.

A standard size hurdle was used as a pattern, and all parts were cut before assembling took place. They were designed in two main parts—the base and the cradle.

The cradle swings around and up in order to be set for the high hurdle position, while the lower crossbar of the cradle in the high position locks into place in a groove on the base. Wing nuts hold the cradle in position to prevent turning while in the low position.

The bases were painted red and the cradle white with black diagonal stripings on the top bar.

Jumping and Vaulting Standards. Up until this year, we had been content to go along with the antiquated method of raising or lowering the bar in the high jump and pole vault. Another vexing point was that our high jump standards did not comply with the official rules in that our crossbar rested on adjustable pegs instead of on the top of the standard as specified in the rules.

This was not due to any lack of desire to conform, but rather to a lack of funds for equipment of this type. This year we can boast of new standards.

Renovating our old standards was a comparatively simple task. Our only cost was for the purchase of two 10' lengths of square aluminum tubing for \$12. By cutting this into two lengths of 3'6" and 6'6", we were able to suit our needs and get both the high jump and pole vault standards from the original lengths.

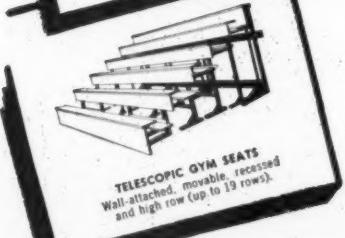
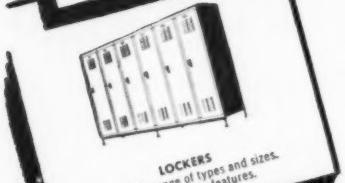
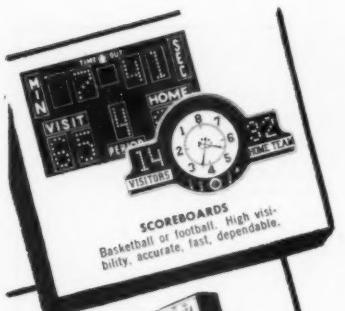
We used the iron bases from the old standards, securely fastening the aluminum to the base. Planing down the wood in our old standards enabled us to use them as the risers in our new standards.

The top of the high jump riser was fitted with a toe-plate 1½" by 2¾", as specified in the rules, to allow the bar to rest on. Now the elevation of our cross-bar can be regulated by the sliding up or down of the riser, and it is held in position by a key extending through the aluminum and wooden riser.

Our jumping standards can be raised to a maximum height of 6'4" and the vaulting standards to 13'10". This more than suffices for the competition in our Class B and Class C conference.

Shot-Put Toe-Board. This was perhaps the easiest to make. Such a simple task that little need be said about it. Since we did not have scrap lumber of 4" thickness, we improvised by using two pieces of 2" thickness. Both pieces were cut to size, rounded and bolted together.

(Concluded on page 59)



**if... it's for a
Gymnasium...**

Specify **MEDART**

Whether you need physical fitness apparatus, backstops, scoreboards, telescopic gym seats or lockers, there is no point in being satisfied with less than the best.

Acceptance of Medart Equipment by thousands of leading schools and colleges — its use in Olympic Games and championship meets — has been earned because of superior design, skillful craftsmanship and fine quality. These, and 78 years of experience, are the "plus" values built into every unit of Medart Equipment — extra values that Medart users never pay for.

When you specify Medart — and insist on Medart — you can be confident you will get the best — equipment that meets or exceeds every Official Standard. No finer equipment is made.

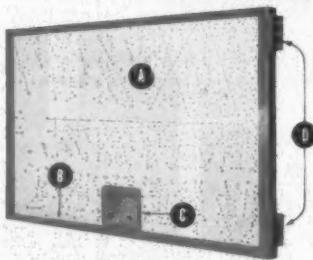
Ask For Literature On
Any Or All Medart Equipment

FRED MEDART PRODUCTS, INC.
3542 DE KALB ST. ST. LOUIS 18, MO.
For 78 Years The Standard Of Quality



Extra STRENGTH! BUILT IN

**NEW Nurre
ALL PLATE GLASS Banks**



Built to resist breakage
in roughest play

① Fabricated from transparent, heat-strengthened Tuf-flex polished plate glass—3 to 5 times as strong as ordinary plate.

② Glass gripped firmly on all sides by wide, rigid angle iron frame. No beveling—glass has square edges to prevent breakage.

③ Extra-large steel face plate, 10" x 9½" x ¼" thick, attached to bank by three widely spaced bolts to provide maximum strength. Only three holes through the glass. Basket mounts securely on four lugs which are correctly spaced to accommodate official basket (No. 960) manufactured by Schutt Mfg. Co., Litchfield, Ill.

④ Two steel mounting flanges on each side. Bank is designed for any type suspension. Also available with flanges and loop for post-type installation.

Conform with new N. B. C. Rule

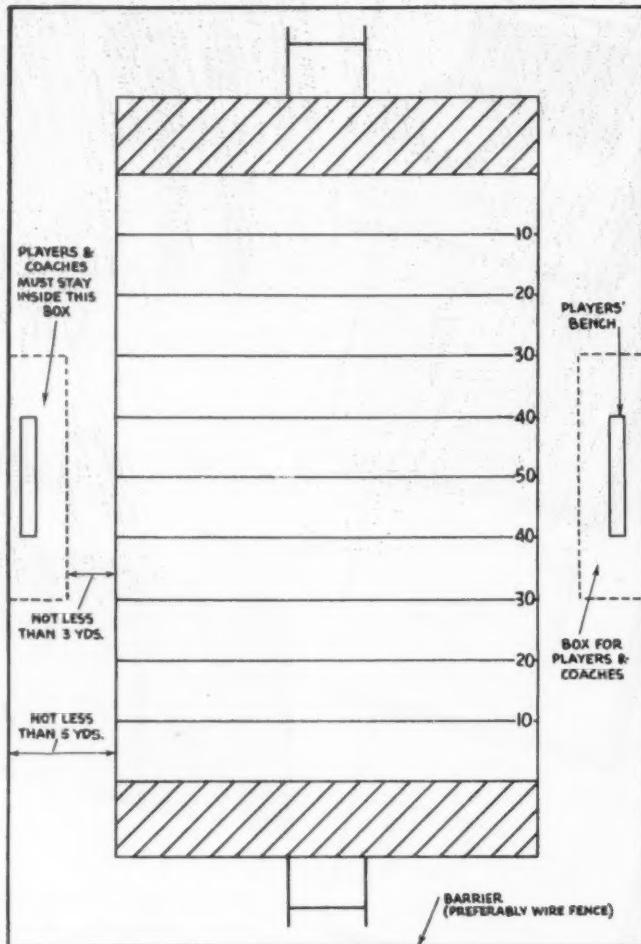
Nurre All Plate Glass Banks are designed to conform with the "all-glass" ruling of the National Basketball Committee for new installations.

Coaches, players, spectators—all praise the permanence and performance of these Nurre Banks. Note, in the features above, how extra strength is built in!

Be sure of the best when you buy new banks. Specify Nurre—the national favorite for over 25 years.

FREE! Illustrated bulletin, containing complete details. Send for yours!

THE NURRE COMPANIES, INC.
Bloomington, Indiana



Alabama-Style Football Field

SCHOOLS having trouble with pests who insist on invading the field before, during, or after football games, may borrow a tip from the Alabama H. S. Athletic Assn.

Last season the Legislative Council of the AHSAA (with the approval of the Central Board) passed a regulation requiring the erection of a barrier, preferably a wire fence, around every football playing field.

This barrier must be located not less than five yards from the boundaries, and spectators and unauthorized persons are required to stay behind it.

In addition to this barrier, a broken line must be drawn in front of the players' benches not less than

three yards from the playing field and extended back to the fence or barrier.

No player, coach, or any other person not actually playing in or officiating the game is permitted to stay outside this box in front of the line.

The above illustration delineates the regulation, which went into effect in 1950.

Its effect on the game should be entirely salubrious. Besides keeping the fans back in the stands where they belong, it will prevent players and coaches from crowding the sidelines and generally interfering with the progress and officiating of the game. This sort of thing has been all too prevalent in recent seasons.

Treated Batrites Last Longer

Hanna's Non-Chipping Process, an exclusive Hanna development, is not just another finish. It's a special treatment that actually binds the wood layers tightly together. Batrites treated with the Non-Chipping Process last longer because they are protected for life. Chipping, splintering and denting are reduced to a minimum. For longer-lasting bats . . . for the finest Northern White Ash . . . for the best in bats . . . you can depend on Batrite.



THE
HANNA
MANUFACTURING
COMPANY

ATHENS, GA. SELMA, ALA.

SUBSIDIARY PLANTS: KINGSTON, N.Y. NASHVILLE, TENN.



AFTER extensive study over a period of years, the National Basketball Committee has approved a fan-shaped backboard of either transparent or non-transparent material for high school and YMCA play.

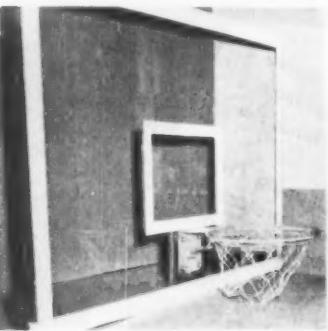
Rule 1, Section 7 stipulates that "when new equipment is being installed for high school or YMCA games, the fan-shaped backboard shall be used." For college and pro games, the transparent rectangular board is mandatory.

While the traditional rectangular board has served ably over the years, the Committee felt that the elimination of unnecessary corners and borders would produce a board which would not only contain all the surface needed for banking purposes but which would offer as good, if not better, a target as the larger board.

The fan-shaped board which has emerged contains only 43% of the area of the sharp-cornered board. Its advantages may be enumerated as follows:

1. Increased visibility of the basket from all corners and ends of the gym.

2. Freer use of the four-foot end space, permitting offensive play from all directions and thus relieving congestion in the lane.



Modern Backboards

3. Less complicated bridgework for hanging the backboard since the weight is reduced by more than half and the span is not so great as to cause warping or twisting.

4. Marked reduction in cost.

5. More pleasing streamlined appearance and a better target.

The small backboard has proved so popular that more than three-fourths of all the installations of the past few years have been of this type, and more than a quarter of a million of them are now in use.

The conventional type of fan-shaped board is made of steel, plywood, plastic, and ordinary lumber. But the latest development is a transparent board made of plexiglas one inch in thickness.

This material is as clear as glass but slightly softer. It can be sawed to the desired shape and no frame is required, since the smallness of the board obviates any danger of warping or twisting.

The standard basket as developed for the fan-shaped steel backboard fits the plexiglas board. In each case

the basket is attached to a metal plate on the back.

Insofar as the official transparent rectangular board for college play is concerned, the leading manufacturers of glass products have succeeded in producing a completely satisfactory product.

A tempered glass is now used with a metal frame protecting the edges. Mounting bracket or flanges attached to the frame allow for use with any type of backboard suspension.

Steel plates are attached to the front and back surfaces immediately behind the ring, and are connected by bushings which extend through holes in the glass. The basket is attached to the front steel plate rather than directly to the glass surface.

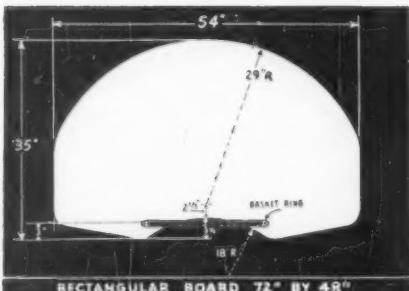
This tempered glass is three to five times stronger than ordinary glass of the same thickness, and will withstand the hardest use.

Plans have been made for glass fan-shaped boards, but as yet these boards haven't gone into production.

Where the small board is made of transparent material, it is necessary to paint a narrow white border and a target. This target is in the form of an inverted U, 24" wide directly above the basket. The target lines are 2" wide, and the border lines are usually 1" in width.



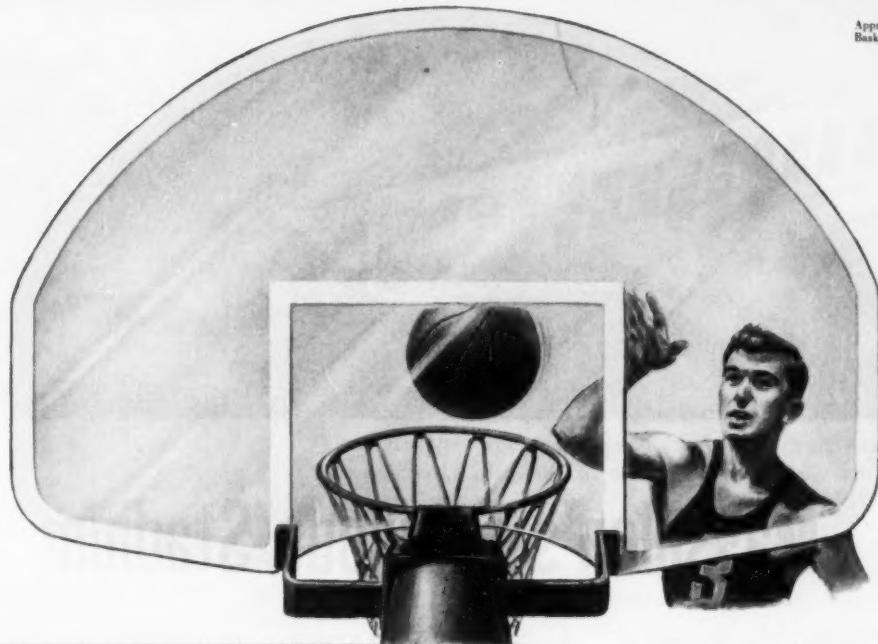
The Legal Basketball Backboards



Illustrated here are the three legal banks. At the far left above is the transparent rectangular glass board, while immediately above and to the right is the fan-shaped board for high school and YMCA play—in both transparent and non-transparent form. The official dimensions for these boards are given in the illustration at the right.

New—Transparent PLEXIGLAS Backboards LIGHTER — DURABLE — NO FRAMING

Approved by National Basketball Committee.



**ALL THE ADVANTAGES OF
THE STANDARD FAN-SHAPE BACKBOARD**

...PLUS...

**CLEAR VIEW—RIGHT THROUGH BACKBOARD.
MORE USABLE SEATS.
NO WOOD OR METAL FRAME NEEDED.
EASIER TO HANG—WEIGHS ONLY 80 POUNDS.**

Want a fan-shape backboard spectators can see through? One that's easy and inexpensive to hang and maintain? Here it is—made of one optically-clear piece of tough, transparent PLEXIGLAS acrylic plastic.

Rugged and rigid, yet less than half as heavy as glass, PLEXIGLAS backboards can be erected with a minimum of supports—and no wood or metal framing at all! This means less interference with vision; spectators see every shot clearly—even through the backboard. And this in turn means more usable seats, more revenue for your team.

Approved for installation by The National Basketball Committee, PLEXIGLAS backboards have proved their durability in service over a number of seasons. For details and prices, contact the supplier nearest you.

PLEXIGLAS is a trade-mark, Reg. U. S. Pat. Off. and in principal foreign countries, by Rohm & Haas Company, Philadelphia—makers of this durable acrylic plastic-of-a-thousand-uses.

URITE PLASTICS FABRICATORS
4740 South Dixie Road, Pico, California

RPM CORPORATION
1245 Seventh St., Denver 4, Colo.

HOLIDAY PLASTICS INC.
410 East 27th Terrace, Kansas City 3, Mo.
PLASTI-LINE, INC.
Jackbarn at Broadway, Knoxville 18, Tenn.

ARMEN PLASTICS
1839 North Throop St., Chicago 28, Illinois

PLASTICS, INC.
Corner Chestnut and Ryan St., Paul 2, Minn.

REGAL PLASTIC COMPANY
710-716 Main St., Kansas City 4, Missouri
VAN HORN PLASTICS
1905 Ingersoll, Des Moines, Iowa



Massillon's Fabulous Stadium

MASSILLON, Ohio—the home of Washington High School—enjoys an enviable reputation in the high school football world; a reputation which we believe is justly merited.

From Paul Brown's day down to the present, our teams have operated with immense success. Over the past 18 years, Washington has won 155 games and lost just 16, for an incredible .906 winning percentage! What's more, the Tigers have been unbeaten nine times and state champs 11 times!

In 1950 we copped our third straight state crown, winding up an unbeaten 10-game season with 407 points to our opponents' 34.

Our success story may be attributed to a thoroughly wholesome set-up. We have good material, a loyal following, and superb facilities. In fact we believe we own the finest high school stadium in our section—if not in the land.

Built in 1939, Tiger Stadium has proved eminently satisfactory. Only two major improvements have been made in the intervening 11 years. In 1945 we added a few steel bleachers, and in 1949 we doubled our lights.

Our football program owes much of its growth to an excellent lighting system. Of our 10 games every season, nine of them are played at

By **CHARLES V. MATHER**

Washington H.S., Massillon, O.

night. Our final game—a traditional affair against Canton McKinley—is reserved for a Saturday afternoon.

All our nocturnal games are played on Friday. This is the common practice in our section, all of our opponents having good lights and stadiums.

Do night games pay? A look at our financial picture tells the story. Our receipts for the season run around \$90,000. In 1950 we drew an average of a little better than 15,000 spectators for our seven home games, with 22,000 coming out for our last night game and 22,000 for our only day game.

So it may be assumed that if you play interesting enough football, the fans will come out regardless of the time. However, we have observed that the day games in this area draw very poorly as a rule.

Our lighting system is a Class A affair, featuring eight steel poles (four on a side) carrying twelve 1500-watt lamps each. These poles are 65 ft. high and are located 15 ft. from the sidelines.

In addition to these main mountings, we have three sets of 1500-watt lights on the roof over the west

stands (10 lights per set), and three poles (65 ft. high) carrying eight 1500-watt lamps each at the rear of the east stands.

If you'll add up the lamps, you'll see that we have a total of 150—giving us a total wattage of 225,000.

The transformers are located on the east and west sides of the field, and the lamps are operated at 10% over-voltage for extra brilliance. A meter reading on the field would show an intensity of 30 foot candles of light.

Earlier in the article, I mentioned the fact that 22,000 fans came out for each of our last two games. That represents the total capacity of our stadium. The seating breaks down as follows:

West stands (concrete and steel), 321 ft. long and 40 rows deep—8000 seats.

East stands (steel), 3000 open type seats and 3000 close type—6000 seats.

South portable stands—3500 seats.
North portable stands—3500 seats.

Track seats, portable—1000 seats.
The rest of Tiger Stadium shapes up as follows:

Stadium area—35 acres, including parking lots and practice fields for football and band.

Parking area—6000 cars.

Stadium track—quarter mile.

(Concluded on page 53)



SHORT OR TALL

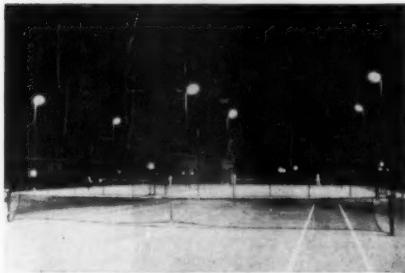
— you can get them all
from Union Metal!



Now—a companion line to nationally-known Monotube sports field floodlighting poles



Playground . . . showing "short" poles.



Tennis Court . . . another typical "short" pole use.



Sports Stadium . . . typical "tall" pole use.

THese strong, durable *tapered* steel poles are now available in both "short" and "tall" lengths. For any nighttime recreational lighting need, there's a Monotube floodlighting pole that will do the job—perfectly! Standardized heights make them readily and correctly adaptable to different needs—make them economical, too.

Monotube steel floodlighting poles help make recreational areas *more useful, more hours, for more people*. They help increase the return from investment—provide for more wholesome outdoor recreational activities.

Build or modernize your recreational areas *better* with Monotube *tapered* steel floodlighting poles. For further information, write The Union Metal Manufacturing Company, Canton 5, Ohio.

FREE BULLETINS!

New bulletin on nighttime recreational lighting. Diagrams, tables, pictures of typical installations. Ask for bulletin FL-102.

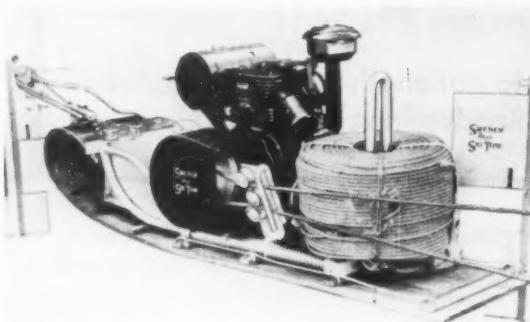


Illustrated bulletin with complete information on Monotube floodlighting poles—assembly, erection, servicing, etc. Ask for catalog No. 76.

UNION METAL
Monotube Floodlighting Poles

NEW EQUIPMENT

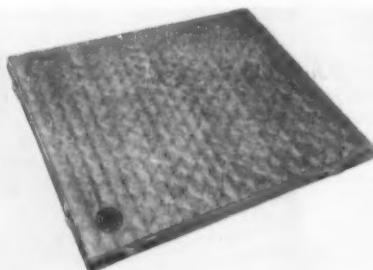
As a service to its readers, Scholastic Coach offers this periodic round-up of new sports equipment items. For further information write to: Scholastic Coach, New Equipment Department, 7 East 12 St., New York 3, N. Y.



• **PORTABLE SKI TOW.** Made by the Sweden Freezer Mfg. Co., this compact, easily transportable tow gives maximum skiing by eliminating tiresome and time-consuming uphill climb. Called the Sweden Speed Ski Tow, it will lift 5 to 8 skiers 500 ft. per minute, uses only a tankful of gasoline a day, and is absolutely safe to operate. Precision designed, sturdily built.



• **TWISTING BELT.** This Pond-Medart device makes complicated gym work easy to learn and provides the ultimate in safety. Because of its unique twisting mechanism and suspension, all tumbling and trampolining stunts can be learned with great ease and safety.



• **PLASTIC MAT COVERING.** This new covering material for wrestling, boxing, and gym mats is supported with heavy, strong duck. Cannot stretch or tear, and will not burn the skin. A product of Premier Athletic Products Corp., it is sanitary because it is non-absorbent. Water and soap will keep it clean.



• **VARNISH REMOVER.** Quick-acting and non-inflammable, "Kurl-Off" is a new paint and varnish remover being distributed by the Hillyard Chemical Co. A clear, colorless liquid, it lifts stubborn paint and varnish from wood surfaces in a matter of seconds. Non-corrosive, non-staining, cannot burn or explode.



• **ALUMINUM SPILL-PROOF HURDLE.** Designed for safety and economy, this Penna. Hardware Co. hurdle facilitates the learning of form by taking the hazard out of practice. Form is not broken when hurdle is struck. It swings down rapidly after force is applied. Can be rapidly changed from high to low hurdle. No costly maintenance required.

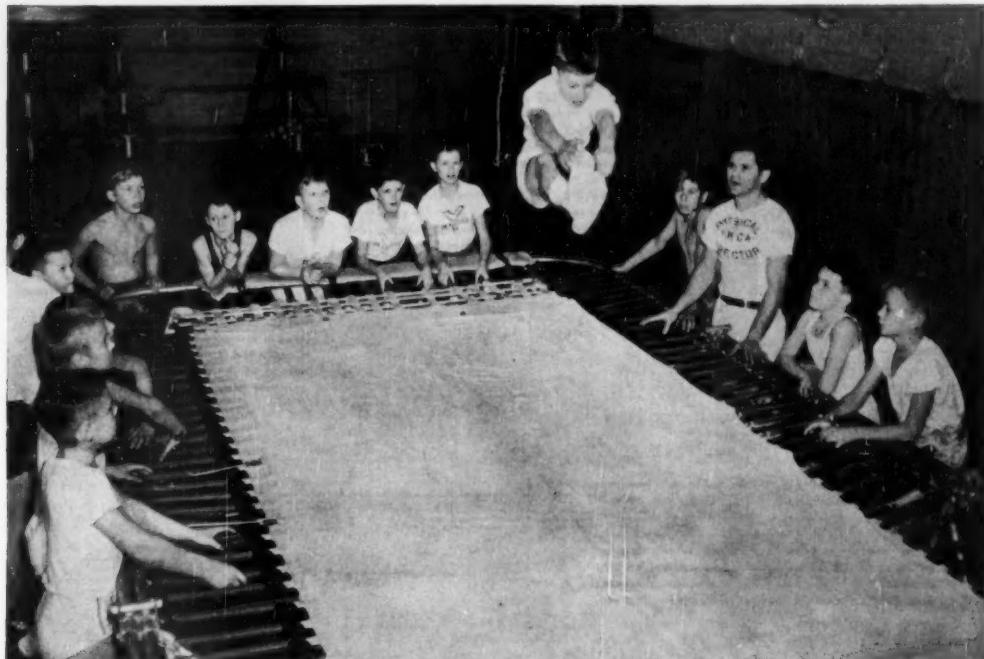


• **RING CLEAT FOOTBALL SHOE.** One of the most spectacular and revolutionary advances in modern football, the newly designed MacGregor-Goldsmit grid shoe will reduce injuries and provide as much or more traction than the conventional conical-cleat shoe. The revolutionary improvement consists of a ring cleat placed on the sole directly under the ball of the foot, and an additional circular arc cleat on both the toe and heel. Made of aluminum alloy, the cleats are lighter and impossible to clog. This drastically reduces injuries, provides greater maneuverability and foot comfort, and relieves strain on ankles, knees, and hips.

The Test of Time Tells the TRAMPOLINE Story

NISSEN

Makers of America's ORIGINAL Standard TRAMPOLINE* Present
MODEL 549-T . . . The Best Features in a Better Trampoline



An aerated woven-web bed. Fits any model. Perfected by Nissen in 8 years of tests and actual use. Hand-woven of 2-in. nylon parachute webbing. Multi-stitched for maximum strength. Durable special metal fittings attached for securing to either springs or rubber cord (exerciser cable). Meets collegiate regulations.

WRITE FOR FREE LITERATURE

*Name TRAMPOLINE Reg. U.S. Pat. Off.

MODEL 549-T Designed and Constructed to "Take It" . . . Extra size FLASHFOLD model with sturdy "V" end support feature affording a full resilient surface . . . new welded built-in spring anchors increase spring life . . . Frame top entirely of all-welded double-steel tubing . . . Easier to mount and dismount . . . Standard for collegiate competition . . . Everything You Expect in a Modern Trampoline.

**TRAMPOLINING - Sport - Physical Education
Training - Exercise for Schools - Colleges
Gyms - Pools - Beaches - Camps - Playgrounds**

MINI-TRAMPS

for Gym, Beach or Pool

**STANDARD TRAMPOLINE
PARTS and ACCESSORIES**

N
I S S E N

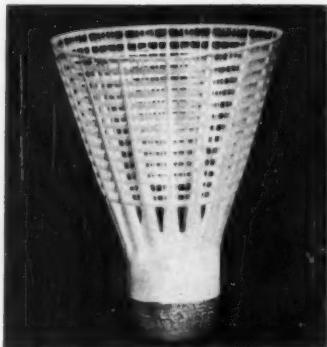
NISSEN TRAMPOLINE CO., 200 A AVE., NW, CEDAR RAPIDS, IOWA

NEW EQUIPMENT

As a service to its readers, Scholastic Coach offers this periodic round-up of new sports equipment items. For further information write to: Scholastic Coach, New Equipment Department, 7 East 12 St., New York 3, N. Y.



• **HELMET FORM.** Specially designed to keep Riddell-made helmets in correct shape while traveling or in storage, this new helmet form also restores helmets that have been in use to their original contour. Developed by John T. Riddell, Inc., the form is made of steel and is easily inserted and removed. The handle shape facilitates carrying or stacking, and the form will fit exactly into all Riddell-styled helmets.



• **PLASTIC SHUTTLECOCK.** Of revolutionary design, this plastic bird has many times the life of the finest conventional feathered-type bird, and is not affected by moisture or long storage. Distributed by General Sportcraft Co., it can be obtained in standard weights for indoor and outdoor play.

• **4-POWER TELESCOPE SIGHT.** Applicable in either the high or low position, this O. F. Mossberg & Sons' scope fits almost every rifle make up to 25-20 cal. The scope features a much sturdier and more heavily constructed mount, which can be easily removed by taking out two screws. All lens surfaces are hard-coated and the scope possesses Mossberg's patented internal adjustment feature.



• **TENNIS BALL.** The Cortland Racket Division of the Cortland Line Co. is introducing a new tennis ball of championship quality, pressure-packed in a distinctive new blue and green can featuring three white balls.



• **WHIRLPOOL BATH.** This Logan therapeutic device is 34" long x 20" wide x 30" deep, large enough to be used by several players at one time. Features a powerful electric motor, built-in aerator, overheat control, adjustable ejector, and a leak-proof steel tub finished in rust-resistant white enamel. Only 135 lbs., it is easy to operate and move about.



• **SHOE PRESERVER.** This John T. Riddell, Inc., special preservative maintains the flexibility and natural healthful qualities of leather, and prolongs the life of shoes. Easy to apply, it is sprayed on or spread over the surface. Keeps natural oils intact.

ONE Stands Out!



Skinner "8217"*. The standard favorite for basketball trunks and warm-up jackets. High lustre, vat dyed, fast color, rayon face, cotton back satin.



Skinner Tackle Twill* Color and flash, with special stamina for the toughest wear. Vat dyed, fast color, water repellent rayon and cotton.



Skinner Combat Cloth*. Lightest, strongest of Skinner athletic fabrics. Fast color, all nylon fabric. Absorbs little moisture. Dries quickly.



LOOKS LIKE A CHAMPION ... ACTS LIKE A CHAMPION!

He gives you that yardage when it *really* counts . . . makes that key block stick . . . and he's a hard-hitting mind reader on defense. One move out of him and you know he's the standout—play after play, day after day.

It's the same in uniform fabrics. Just one look at the Skinner label and you know that here too you've spotted the *one* that stands out. You *know* you have the fabric that's proved in performance. You *know* it stands up longer under hard wear and many cleanings, holds its shape and color, gives more for the money, helps keep team morale up high.

So get Skinner—the best—and be sure. You get top performance, top appearance, top value, top economy in the long haul. Look for the Skinner label.

We'll be at the American Football Coaches Convention, January 11-12 at the Baker Hotel in Dallas, with an interesting and informative exhibit. Looking forward to seeing you!

FOR COMPETITIVE SPORTS . . .
ONE NAME STANDS OUT

Skinner
FABRICS

WILLIAM SKINNER & SONS, NEW YORK 3, N.Y.
*T.M. Reg. U.S. Pat. Off.

1950 National Honor Roll • Schoolboy Track

100 YARDS DASH

Golliday (Phillips, Chicago)	State	9.6
Blackburn (Jefferson, Los Angeles)	S. League Prelim.	9.6
Thomas (Cleveland, Tex.)	State	9.7
Ulrich (Hinsdale, Ill.)	District	9.7
Green (Jefferson, Los Angeles)	S. League Prelim.	9.8
Macon (Cathedral, Los Angeles)	C.I.F. 1/4 Final	9.8
Graffio (Huntington Park, Cal.)	State Prelim.	9.8
Finn (Williamsport, Pa.)	State	9.8
Miller (Napa, Cal.)	El Corrito Relays	9.8
Childress (Odessa, Tex.)	State	9.8

220 YARDS DASH

Thomas (Cleveland, Tex.)	State	20.9
Childress (Odessa, Tex.)	State	21.1
Ulrich (Hinsdale, Ill.)	State	21.1
Turner (Alameda, Cal.)	State Prelim.	21.2
Green (Jefferson, Los Angeles)	Compton Inv.	21.3
Blackburn (Jefferson, Los Angeles)	State	21.3
McGlinn (Immaculate, Leavenworth)	State	21.3
Lindsey (Amherst Central, N. Y.)	State	21.4
Johnson (San Diego, Cal.)	C.I.F. Semis	21.4
Keegan (New Rochelle, N. Y.)	Intersectional	21.4

440 YARDS DASH

Green (Jefferson, Los Angeles)	City	48.6
Miller (Napa, Cal.)	State	48.8
Jones (New Rochelle, N. Y.)	Intersectional	49.1
Carson (Arlington Hts., Ft. Worth, Tex.)	State	49.4
Hunzke (Fremont, Oakland, Cal.)	State	49.6
Osbourne (Longmont, Colo.)	State	49.6
Griffin (Dorsey, Cal.)	State	49.7
Ashmore (McAlester, Okla.)	State	49.7
Lee (Durant, Okla.)	State	49.7
Moss (Pacific Grove, Cal.)	No. Coast Sect.	49.7

880 YARDS RUN

Stanley (Jefferson, Los Angeles)	State	1:53.9
Wheeler (Union, N. J.)	State	1:54.7
Southgate (Wilson, Long Beach, Cal.)	Compton Inv.	1:57.3
Van Pelt (Bellows, Mamaroneck, N. Y.)	Intersectional	1:57.7
Sanborn (Glendale, Cal.)	Compton Inv.	1:57.8
Simpson (Fowler, Cal.)	Central Section	1:58.0
Nelson (Stockton, Cal.)	San-Joaquin Sect.	1:58.3
Maynard (La Harpe, Ill.)	District	1:58.5
Jarvis (Clinton, Okla.)	State	1:58.7

ONE MILE RUN

Bauer (Washington, San Francisco)	State	4:23.7
Kelley (Bulkeley, New London, Conn.)	State	4:23.8
Carter (Glendale, Cal.)	State	4:23.8
Deems (Rye, N. Y.)	Intersectional	4:25.0
Dunn (El Dorado, Placerville, Cal.)	State	4:26.5
Lambert (Central, Muncie, Ind.)	State	4:26.7
Wheeler (Evanston, Ill.)	District	4:27.0
Tidwell (Kiowa, Kan.)	State	4:27.1
Murphy (Calumet, Chicago)	State	4:27.5
Parker (Lyndhurst, N. J.)	State	4:27.5

HIGH HURDLES

Turner (Glendale, Cal.)	State	14.1
White (Redlands, Cal.)	C.I.F.	14.2
Wright (Redlands, Cal.)	C.I.F.	14.2
Hindman (Longmont, Colo.)	State	14.4
Stevens (Phillips, Chicago)	State	14.4
Sommers (El Monte, Cal.)	So. Counties	14.4
Russell (Mesa, Ariz.)	State Prelim.	14.4
Edwards (Bakersfield, Cal.)	W. Coast Relays	14.5
Jenkins (Mansfield, Ohio)	E. Tech. Relays	14.5

180 YARDS LOW HURDLES

Turner (Glendale, Cal.)	C.I.F.	18.9
Sommers (El Monte, Cal.)	C.I.F. Semis	19.2
Hindman (Longmont, Colo.)	State	19.3
Wright (Redlands, Cal.)	C.I.F. Semis	19.3
McGlynn (Central, Binghamton, N. Y.)	Intersectional	19.4

Hamilton (Jefferson, Los Angeles)

Thomas (San Diego, Cal.)	State	19.4
Russell (Mesa, Ariz.)	C.I.F. Semis	19.5

State Prelim.

19.5

POLE VAULT

Widman (Narbonne, Los Angeles)	Compton Inv.	13-9
McDonald (Wilson, Long Beach, Cal.)	C.I.F.	13-7
Red (Lemoore, Cal.)	State	13-1/2
Wright (Lawrenceville, Ill.)	State	13-1/8
Hanson (Grossmont, San Diego, Cal.)	Coast League	12-10
Sommers (El Monte, Cal.)	C.I.F. Semis	12-9 1/8
Moler (Polytechnic, Los Angeles)	City	12-9
Miller (Webb, Claremont, Cal.)	C.I.F.	12-9

HIGH JUMP

Wilson (San Jose, Cal.)	No. Coast Sec.	6-5 1/4
Dubard (Libbey, Toledo, Ohio)	State	6-5
Mead (Central, Bay City, Mich.)	State	6-4
Pearl (Duban, Dayton, Ohio)	State	6-4
Shelton (Washington, Los Angeles)	S. Pac. League	6-4
Gelvin (Polytech., Long Beach, Cal.)	Pacific League	6-3 1/2
Bonham (Pomona, Cal.)	Citrus Belt Lg.	6-3 1/4
Hilton (Burroughs, Burbank, Cal.)	El Monte Relays	6-3 1/4
Sinclair (Washington, Los Angeles)	City	6-3

BROAD JUMP

Turner (Glendale, Cal.)	C.I.F.	24-6 1/2
Johnson (Jefferson, Los Angeles)	State	24-2 1/4
Houston (Jordan, Los Angeles)	E. Marine Lg.	23-9 1/2
Haviston (Central, Columbus, Ohio)	Ohio Wes. Rel.	23-8
Willson (Anderson, Ind.)	Sectional	23-2 1/2
Young (East Palestine, Ohio)	State	23-2
Woods (Marshall, Los Angeles)	Northern Lg.	23-1 1/2

SHOT PUT

Bauer (Benton, Ill.)	District	58-8
Norris (Grossmont, San Diego, Cal.)	C.I.F.	58-2 1/2
Lawshe (Bronxville, N. Y.)	Schenectady Int.	58-1
Morgan (Mariemont, Ohio)	State	56-11 1/4
Powell (San Diego, Cal.)	Compton Inv.	56-10 1/2
White (Chula Vista, Cal.)	C.I.F. 1/4 Finals	56-1 1/2

DISCUS THROW

Bauer (Benton, Ill.)	District	162-1/2
Lenzini (Waukegan, Ill.)	Highland Park	161-7
Fuchs (Evanston, Ill.)	District	161-0
Mueller (C.B.C., St. Louis)	Clayton Inv.	160-1 1/4
Eckardt (Normandy, Mo.)	District	158-1

JAVELIN

Rocker (Jesuit, New Orleans)	State	198-11
Kolaba (Ontario, Ore.)	State	196-4
Provencier (Griswold, Conn.)	State	185-9
Haase (Vincent, Erie, Pa.)	State	182-7 1/2
Flowers (Wyandotte, Kan. City, Kan.)	State	180-10

440 YARDS RELAY

Odessa, Texas	State	42.9
Mercersburg, Pennsylvania	Penn Relays	42.9
Cardozo, D. C.	Penn Relays	43.0
Baytown, Texas	Regional	43.3

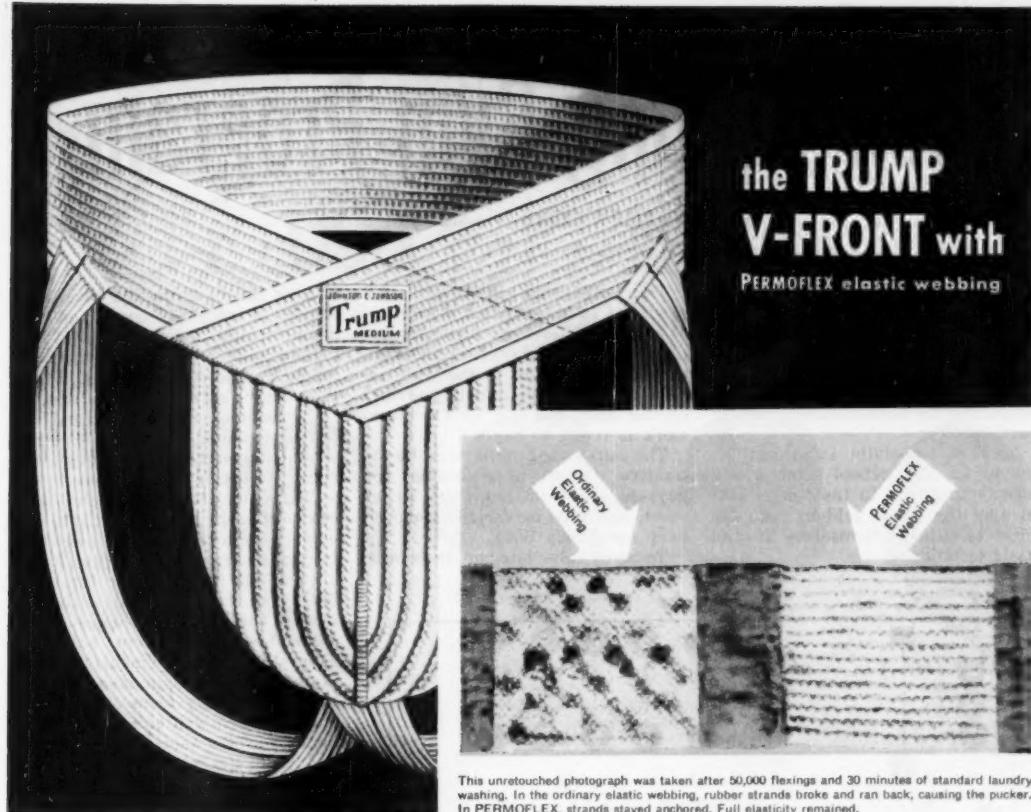
880 YARDS RELAY

Jefferson, Los Angeles	State Tryouts	1:28.4
Phillips, Chicago	State	1:29.2
Glendale, California	C.I.F. Semis	1:29.8
San Diego, California	State	1:29.8
Jordan, Los Angeles	State	1:29.9

ONE MILE RELAY

Capitol Hill, Oklahoma City	State	3:25.3
Galveston, Texas	State	3:25.8
Amarillo, Texas	State	3:26.9
Emerson, Gary, Indiana	State	3:27.1
East Tech, Cleveland	Senate	3:28.0
Boulder, Colorado	State	3:28.6
West, Cleveland	Ohio U. Relays	3:28.8

(Compiled by E. A. Thomas, National Federation representative on the Track and Field Rules Committee, for the 1951 Official Track Guides.)



This unretouched photograph was taken after 50,000 flexings and 30 minutes of standard laundry washing. In the ordinary elastic webbing, rubber strands broke and ran back, causing the pucker. In PERMOFLEX, strands stayed anchored. Full elasticity remained.

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THE NEW YORK YANKEE BASEBALL CLUB is using and endorsing Johnson & Johnson V-Front Supporters for the fourth straight season.

Self-Testing Gym Program

By I. STANLEY CORB, Providence, Rhode Island

SELF-TESTING skills have much to offer the physical instructor and coach. A sound, well-organized program is thoroughly enjoyable and helps inculcate the fundamentals of various sports, thus preparing the boys for future varsity participation.

This is especially important on the junior high school level, where most youngsters, in their eagerness to play the game, seldom take the time to school themselves in the basic techniques.

The skills may be taught and practiced in the regular gym class, or may be offered as pre-class activities. In the latter connection, they beautifully fill in the void between the time the first boy arrives on the floor and the formal class-work is ready to begin.

The self-testing skills must be attractive enough to encourage the boys to hurry up from the locker room, and must be varied enough to keep everybody busy.

To be of value later on, they must

also be taught correctly. Each step should be carefully explained and demonstrated, and pictures of famous players and articles by famous coaches should be placed where they can be seen for comparison.

Corrections, suggestions, and repeated personal attention, together with praise and encouragement, will stimulate a continuous interest.

The skills are self-testing and competitive in the sense that a boy may compete against his own best record or carry on a friendly rivalry with others in his group. Improvement can be measured each day against the previous tries.

Records may be kept, but these generally are a detriment. There is more wholesome enjoyment and less haste in moving from one skill to another when written scores are not kept. Learning seems to go hand in hand with the relaxation that comes in doing something pleasant and without tension. The less skillful boy isn't as likely to get discouraged, and will carry on because of the fun he gets out of the skills.

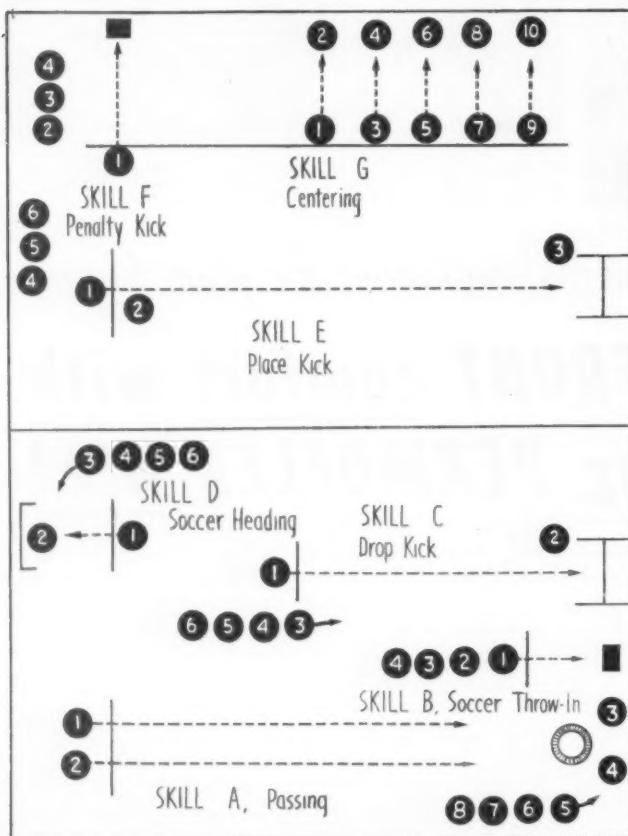
The self-testing skill program should be seasonal. In the fall, it should consist of football and soccer; in winter, basketball and volleyball; and in the spring, baseball, handball, and track. In mild weather, it would be ideal to set up the activities out of doors.

Following are the skills we have successfully employed in the gym for the past 15 years.

In the fall we lay out the gym as shown in **Diag. 1**. In Skill A, the football throw for accuracy, an old tire is hung on the wall, or a target may be drawn on the wall or on a mat. The boys stand about 10 to 15 yards from the target.

Since the boys are allowed to move freely from one skill to another, a set of regulations for taking turns or places in line, must be understood by all. In this particular skill, the first two boys become the throwers, while Nos. 3 and 4 are the chasers. When they recover the ball, they go to the throwing line and the waiting boys move along towards the target, as indicated.

(Continued on page 42)



Diag. 1, lay out in the fall for football and soccer activities.

Try it now and find out
WHY Sports Authorities use and recommend

Courtley



ANTHONY F. DOUGAL
Head Trainer of
Dartmouth College



BILL GLASSFORD
Nebraska's Head
Football Coach



JACK COOMBS
Duke University
Baseball Coach



PEE WEE REESE
Brooklyn Dodger
Captain

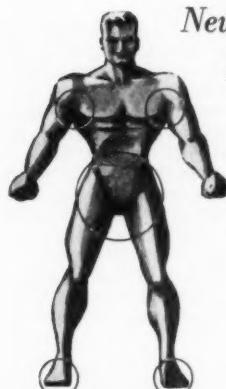


HARVEY HARMAN
Rutgers University
Football Coach

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If classes are large, one turn apiece will keep the lines moving, but three turns give the throwers a better feel of the action, and is recommended for small classes or where a full period is assigned to the skills.

The soccer throw-in, which is Skill B in the diagram, consists of throwing the ball against a target on the wall 15 feet away. The ball will rebound to the thrower, who can recover it himself. This can be done rapidly enough to permit three or more throws a turn.

In Skill C, the drop kick, a goal post is marked on the wall about 10 yards or more from the starting line. The distance in these skills will, of course, be determined by the available space, but it should be short for younger boys. Otherwise, they will sacrifice skill for distance.

Emphasis should be on form and skill rather than distance. Smaller boys should be advised to move closer so that their form won't be distorted through trying too hard.

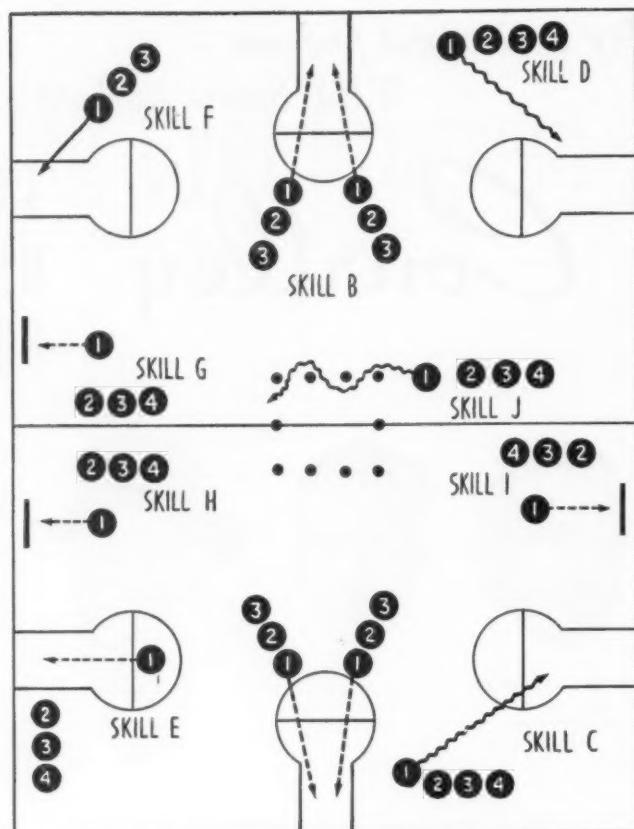
As shown in the diagram, No. 1 is the first kicker and No. 2 is the chaser. He replaces No. 1 and No. 3 replaces him. Note where the chasing lines stand in Skills C and D. This allows them to watch the ball in their own activity without interference or risk of being hit by another ball.

An added word of caution may be in order here. Try to have all throwing and kicking going in the same direction. This permits boys moving to other skills to walk behind the kickers and throwers, and helps to avoid injuries. This must be brought to their attention as part of the instruction. It is just as well to keep the lines back of or on a line with the kickers, since rebounds return with some force and are hard to judge off the wall.

Skill D, soccer heading, requires the usual soccer height goal post, but may be abbreviated in width. No. 1, the header, stands back about 10 feet out, while No. 2 stands in the goal as goal-tender. He tosses the ball up in front of No. 1 who tries to head it past him. No. 2 then becomes the header and No. 3 replaces him. Again the number of turns will depend on time and the numbers in the class.

Skill E is the place kick, and we have found 35 to 40 feet a good distance for junior high school age. In the order in which they arrive at the skill, No. 1 becomes the kicker, No. 2 the holder, and No. 3 the chaser. They move up and replace each other in that order. New arrivals go to the end of line, which should be kept well back out of the way.

A wooden block makes a good



Diag. 2. Lay out in the winter for basketball-volleyball skills.

target for the soccer penalty kick in Skill F. This keeps the ball on the floor, develops accuracy, and avoids the danger of having a goal-tender injured at such a close range. Ten to 15 feet is about right for this.

The boys line up as shown and the procedure is the same as for the other skills. We found the running kick wasn't as good as the standing kick because it didn't permit attention to the foot positions and encouraged the boys to kick hard rather than straight.

The last skill, G, centering, keeps a great many boys busy. All the remaining space may be used for this. The centers may work at T or single wing passing. They usually pair off and take turns at their own discretion, since some boys prefer to be centers and others receivers. If this is suggested to the class, boys will naturally "pair up."

The winter skills are set up as in Diag. 2. This is only a suggested setup since each gym will have to modify it depending on the facilities and baskets available. In this case it

is set up for the standard size junior high school court with four side baskets and one at each end. The skills are arranged to include all the basic fundamentals of shooting, dribbling, and passing.

Skills A and B are the long and short, or long shot and follow-up. Two lines are set up at each basket, at a maximum distance of 20 feet. The first shot is the long set shot, with both hands, and must be recovered before it bounces twice. If it bounces more than once, the boy is penalized by losing his short shot.

The short shot may be executed with one or both hands, though a one-hand push shot or lay-up is preferred. If the ball goes out of bounds, the short shot is forfeited. This is to teach a quick recovery and follow-up after the long shot.

We make the younger boys shoot their set shots without a jump. This usually tends to move them in close enough to concentrate on form and accuracy rather than distance. It is a good idea to encourage the boys to practice their pivots, fakes, and

hooks on their short shots.

In all the skills, systems of scoring can be set up to suit the groups. In the long and short shots, for instance, a point value of two and one may be used. If the boys keep their own scores or compete against each other, they quite often improvise on scoring methods and do it to their own satisfaction.

Skill C is dribbling in and shooting from the right side, while D is the same from the left. This furnishes an opportunity to execute the lay-up shot with both right and left hand. The dribble is from about 20 feet out. The shooter recovers his own shot and must make an accurate return pass to the next dribbler.

The foul shooting set up at E has the first boy shooting and the next in line recovering and taking his place. For the younger boys, we insist on the two-hand underhand shot. Later on, we encourage the older boys to use it, but don't insist if they can attain accuracy with the other style. However, the basic underhand style should be perfected first, since it is acceptable to all coaches.

In Skill F we have the quick follow-through or follow-up shot. Each boy goes in and takes the preceding shooter's rebound and shoots from where he recovers it. He must clear out as soon as he shoots, and the boy coming in for the rebound and shot must learn to time it and shoot from all recovery positions. This teaches versatility in shooting and recoveries under the basket. It comes very close to simulating game conditions under the basket.

For dribbling we set up Indian clubs as in J. The boys dribble in and out around the clubs. As they improve they learn high and low dribbles, and to change from left to right hand as they weave in and out. The boys waiting their turn take the ball from the dribbler as he finishes one or two turns around the Indian clubs.

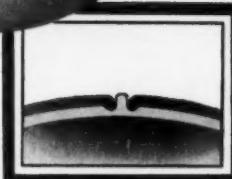
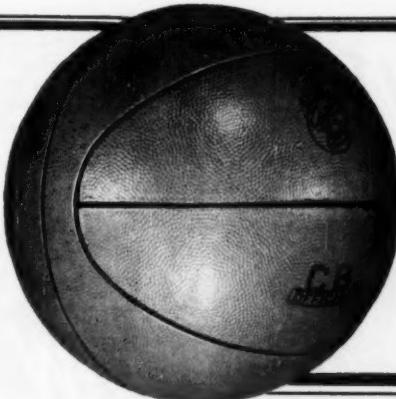
G, H, and I are simple volleyball skills. A line is drawn on the wall eight feet high. The player throws the ball above the line and after the rebound continues to bat it against the wall as in volleyball. If the ball strikes below the line, misses the wall, hits the floor, or is missed by the player, he is out. Older boys may start by serving the ball against the wall.

The described skills are valuable only if they are made attractive. The instructor must know his fundamentals, and teach them as though to his varsity. The boys must be stimulated by a realization of their value in varsity competition.



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considerable amount of money can be saved by attention to this detail.

The most vital requirement in keeping equipment in good condition is the storeroom. This area should be large, well lighted and ventilated, and should have plenty of boxes, bins, and shelving. This is the ideal situation, of course.

Most schools, however, do not possess large storerooms or other facilities for keeping their equipment in good condition. It thus becomes necessary to exploit the available space. This can be accomplished by installing some shelving, boxes, or bins for storing equipment not in use.

In packing shoulder pads, the old-fashioned hall tree can be utilized with great success by affixing the pads one on top of the other on

Reconditioning of Equipment

(Continued from page 16)

the tree. Using this method, you can stack 40 or 50 shoulder pads in a space the width and length of the pad.

Some coaches have found that by reversing the pads—putting them on the hall tree upside down—the weight of the pads on top of one another will shape the pad outward instead of inward, so that they will fit the player without digging into his shoulders.

About 10 to 15 hip pads can be stacked one on top of the other on the shelves or in boxes or bins. Or,

better yet, they can be hung overhead on a piece of 2" x 4" by inserting hooks on the board and hanging the pads by the buckles.

Shoes should be kept in pairs, and can be stored in used shoe boxes or placed on a dry floor. If there are any signs of dampness or mildew in the building, boards should be placed on the floor and the shoes laid on the boards.

Knit goods, such as jerseys, can be suspended on hangers. On the market today are a number of different types of equipment hangers which are very practical for hanging and drying out equipment.

Helmets may be easily stored by stacking them on a shelf, or by fitting them on home-made hangers. These may be adapted from old wire coat hangers: Cut a piece 6" to 8" long, and bend it into an S; then stick the top part of the S into the hole in the ear of the helmet and hang it up on a pipe overhead.

The storeroom should have some type of ventilation, either by a window or by slits or holes in the door, so that the air can circulate.

It is also advisable to install, where possible, an exhaust type of ventilating fan which draws the air out of the room. An ordinary oscillating house fan, when set on the floor, will also dry out any wet or damp equipment.

There should be no excessive heat in the drying room. In fact, it's better to use no heat at all, just the circulation of air.

An excellent plan when playing at home on a wet and muddy field is to run the boys through the showers with their uniforms on. This will not wet the equipment any more than it already is and, by flushing off the mud, will greatly facilitate the drying process.

To carry out this program successfully, an equipment manager is essential. However, the manager will be successful only if he is taught how to handle and take care of the equipment. He should be taught to check the following:

Shoes. Check the laces, inner-soles, and cleats; and oil as often as necessary, according to weather conditions. Replace any broken laces, inner-soles, and worn-down cleats. Never permit the cleats to wear down unevenly so that the shoe is twisted out of shape. This produces ankle and knee injuries. Cleats particularly should be

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checked every day, before and after practice.

Helmets. Check the webs and chin straps. Replace the chin strap where necessary, and in checking the web make sure that it's 1" to 1½" from the top of the crown.

Shoulder pads. Look for worn laces, rips, tears, and lost or torn flaps.

Hip pads. Check the straps and buckles, and look for rips and tears.

Rip pads. Same as above.

Jerseys. Check for torn letters, rips, and tears. This holds true for all knitwear.

Pants. Check rips, tears, the elasticity at the knees, and worn laces; also the pockets that hold the thigh pads and knee pads.

- Any damaged equipment should not be issued, but should be sent to the reconditioner for the necessary repairs. All equipment used by one boy and issued to another the next season, should be thoroughly cleaned and sterilized.

Batting Tee

(Continued from page 18)

22 inches long and the latter 34 inches long.

To one end of each of these, attach a six-inch piece of one and one-eighth inch radiator hose. Slip the hose about three inches over the end of the stick and fasten it with a clamp.

This gives the stick a flexible top, and the end of the hose forms a natural depression in which to place the ball. The heights of the sticks may be varied by simply adjusting the wing nuts on the bolts.

The tee is simple to use, but a few suggestions might be offered to increase its efficiency. To begin with, place the tee facing a screen or wall so that you won't have to chase the balls. Draw a plate and a batter's box and place the tee accordingly.

An inside pitch should be hit eight to 12 inches in front of the plate, a middle pitch about six inches in front of the plate, and an outside ball three inches in front. Start at a low height and work upward, concentrating on the boy's weaknesses.

Pay particular attention to the stride. It is a vital part of hitting. Always have the boy try to step the same distance every time, whether he is hitting a fast or curve ball or an inside or outside pitch.

If he doesn't knock the tee over with the first several swings, don't let him become discouraged. It will take a great deal of practice before he will be able to meet the ball properly every time.

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MINNESOTA was playing Northwestern, and there had been 35 fumbles. Dick Hanley, then head coach of Northwestern, ordered a backfield sub to warm up. The lad ran along the sidelines and was then tossed a ball. He fumbled it. A spectator promptly bellowed: "Send him in, Hanley, he's ready."

Pudge Heffelfinger, the Yale immortal, and Fritz Pollard, the Brown star of 1918, appeared recently on a radio show. After the broadcast, Pudge told Pollard, "I saw you play once. You were the razzle-dazzle kind. In my day, I'd have broken you in two."

"Shucks, Mr. Heffelfinger," Pollard drawled, "you couldn't have even broken my stride."

One of the roughest and toughest of all the Chicago Bears was George Trafton. Big George was in the middle of things one Sunday when the Bears flattened four Rock Island men in 12 plays. The Rock Island crowd became extremely restive.

Soon as the final gun sounded, Trafton raced for the bench. He slipped on a sweatshirt to cover his number, grabbed a couple of bottles for defense, then took off for the nearest exit. Before leaving the park, however, he was stopped by George Halas, who handed him an envelope. "Stick this into your pants," Halas ordered.

Outside the park, Trafton hailed a cab. As he leaped in, a barrage of rocks crashed through the windows. So he opened the other door and started running. He finally picked up a lift and headed for the next town. On the way he opened the envelope and discovered \$7,000 in bills—the Bears' share of the receipts.

The next day Halas explained. "I figured you were our best bet to save

the dough. I knew that you'd be running for your life, whereas all I had to run for was the \$7,000."

Poor Concord (Mass.) High School. After winning 48 football games in a row, they agreed to play in the Piedmont Bowl on December 1; and Reynolds High, of Winston-Salem, N. C., nosed 'em out, 14-13.

That single point gave Concord its first defeat in five years, and prevented them from breaking a 42-year-old state record for consecutive victories.

With touchdowns selling at a dime a dozen, it was inevitable that some schoolboy would snap Bill DeCorrevont's scoring record of 212 points, made in 1937 at Chicago Austin High. But you'd hardly think that a 135-pound sophomore halfback would be the one.

That's Johnny Giantonio, of Netcong (N.J.) High. The little sophomore ran up 245 points in eight games last season. He went into his last game needing 21 points to crack the DeCorrevont mark. He came through with eight touchdowns and five extra points, in leading his team to a 63-6 victory.

The all-time schoolboy record, however, is still 318 points. Dick Todd, the former Washington Redskins great, set it in 10 games while at Crowell (Tex.) High in 1934.

Like everybody else, we were saddened to hear of the death of Georgetown's fine young sprinter, Jim Fielding. The Hoyas sophomore had won a number of championships and set several records, and was figured as a real comer. A few days after his death, we were surprised to receive a letter from his high school coach, Pete Wilson, of Metuchen (N.J.) High.

"This is to inform you that Jim Fielding, whose picture appeared on your February 1949 cover (we were completely unaware of this), passed away after a brief illness brought on

by a chronic kidney ailment.

"While in high school, Jim set several state records and captured the national interscholastic 60-yard title at Madison Square Garden in 1947 and 1948. Upon transferring to Seton Hall Prep in 1949, he won the national prep school 60-yard dash, equaling the record of 6.3.

"The boy was well liked by everyone and his death came as a great shock. I know he got a big kick out of your cover, which showed him winning the 1948 national 60-yard indoor championship. He treasured that among his things."

With less than a minute to play, Florida was clinging desperately to a 31-27 lead over Vanderbilt. Haywood Sullivan, the Gator field general, decided on quarterback sneaks to kill the rest of the time. Vandy Capt. Faulkinberry slammed Sullivan to the ground on the first two, getting more desperate with each passing second.

On the third one, the big Vandy tackle gave vent to his feelings. "Sullivan," he said, "I ought to kill you."

Sullivan grinned up at him. "Sorry," he said, "you haven't enough time."

When a fan at a Baltimore Colt drubbing asked an usher why there was no scoreboard in the stadium, the reply was: "It's part of the Colts' strategy. The coach doesn't want his players to know how bad they're getting licked."

(The last two funnies were passed along by Wirt Gammon, columnist of the *Chattanooga Times*.)

After warming up his boys for their game against Yuma (Ariz.) High, Coach Bud Robinson, of West Phoenix High, took them into the gym for a short rest. The players lay down on the floor in the darkened building, while Bud went to the other end for a chat with the Yuma coach, Jim Moore. As the two coaches were conversing, they suddenly heard someone giving the West Phoenix team an impassioned pep talk. "It's the toughest game you've got... but you can win if you'll just get in there and fight...."

Robinson and Moore looked at each other in astonishment as the person concluded his oratory and came walking toward them. The guy who had West Phoenix all primed to go out and knock the Criminals (Yuma) out of the park was Ed Albrick, Yuma's assistant coach. *He thought he had been talking to his own ball club!* (Relayed by R. T. Gridley, assistant principal of Tucson (Ariz.) High, from an item in the *Phoenix Gazette*.)

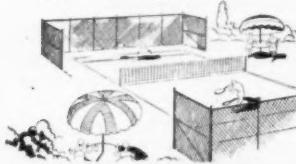
Those fourth-down plays drive you crazy, says Don Young, coach at Black Hills Teachers College (Spearfish, S. D.). Take the Black Hills' game against undefeated Southern Teachers, for example. On fourth down, in the second quarter, South-

STEWART PRODUCTS for your school

If the product you need is made of iron, wire or bronze,
it will pay you to write us, because . . .



Stewart Chain Link Wire Fence is made in several weights and heights, with or without arrangement for barbed wire. Style 3TH shown above.



Tennis Court Fence—backstops as shown, or complete enclosures. Made in heavy-weight and mediumweight construction.

Stewart Metal Specialties meet virtually every school requirement. A few of the more popular items are illustrated. In addition to those shown are such products as: Iron Picket Fences, Skylight Guards, Wire Window Guards, Steel Sliding and Folding Gates; Settees (steel framework with wood slats), Flagpoles, Bronze Plaques, Stadium Seat Brackets and others. We'll be glad to send literature containing complete information. When writing please be sure to mention products in which you are especially interested.



Wire Mesh Partitions—for locker rooms, toolrooms, equipment storage, etc. Sectional. Fit any space. Easily and quickly erected.



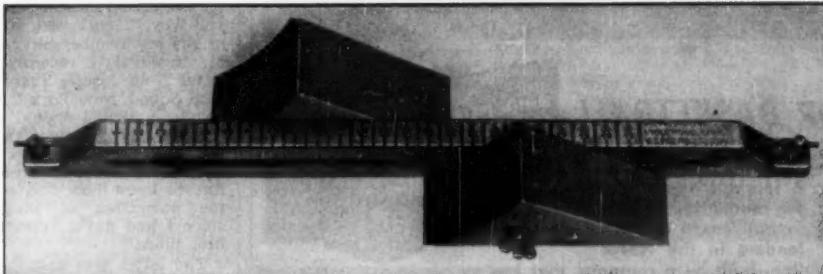
Baseball Backstop. Sturdily built. 20' wide, 12' high with 10' wings set at an angle on each side. 4' overhang at top.



Experts in Metal Fabrications Since 1886

The Stewart Iron Works Co., Inc., 1875 STEWART BLOCK, CINCINNATI 1, OHIO

ARNETT STARTING BLOCKS



★ The Finest, Most Efficient Starters and Time Savers on the Market
★ Used by Many Schools and Colleges—One for Each Lane

THE ARNETT STARTING BLOCKS HAVE

(1) Individual Adjustment (takes 3 to 7 sec.); (2) Replaceable Foot-Facings; (3) Full Guarantee (material & workmanship).

Some Records Made with Arnett Blocks

100-yard dash	Patton, U.S.C.
220-yard dash	Patton, U.S.C.
120 high hurdle	Attlesey, U.S.C.
220 low hurdle	Dillard, Baldwin
440-yard run	McKinley, Illinois
880-yard relay	U.S.C.

These Relays and Many More Have One for Each Lane

L. A. Colosseum	Calif.	Penn.
Drake	Modesto	Big 9
Fresno	Texas	Nat. AAU, '47-50
Long Beach	Kansas	N.C.A.A., '47-50
Olympic Trials	Compton Inv., '47-50	Official Black California Intersch. Federation, '47-50

SCHOOL PRICE: \$18.00 each, F.O.B. Inglewood, Calif. Not Sold Through Dealers.

RICHARD W. ARNETT

P. O. Box No. 527, Inglewood, California

ern passed for the first touchdown. Shortly thereafter, they scored again, making it 13-0.

With less than five minutes to go, Black Hills had the ball on their 40 with fourth down coming up and 7 to go. They sprung a version of Bob Zuppke's "Flying Trapeze" and wound up on Southern's 9. On fourth down, they sneaked over for the t.d. Then, with less than 30 seconds to go, Black Hills had another fourth down with 7 to go on their 30. They threw deep for another touchdown, tying the score. Thereupon they faked the kick and passed for the extra point, winning 14-13.

When Eddie Erdelatz brought his

much-beaten Navy team to Philadelphia to do battle with awesome Army, indignation was rife at West Point because the weekly A.P. poll had given Army no better than second place in the nation.

"We're burned up, too," Eddie said. "We're ranked 65th, and we should be 64th."

Erdelatz can always manage a grin. Early last season, he remarked on the tremendous burden imposed on the boy who tries to carry both a football and an academic course at either of the service institutions. It was ever so much more difficult, he said, than anything he had experienced in college.

"Well, what did you take at St. Mary's?" he was asked.

"The morning paper," Eddie said.

When George Hamric, now coaching at Grafton (W. Va.) Jr. High School, was attending Fairmont State College, he made baseball history in a game against Glenville. George, a .423 hitter, took a hard cut at a first pitch and sent it down the left-field line, foul. The crowd started chanting, "Strike him out! Strike him out!"

The next pitch came in around the knees and the umpire yelled, "Strike three! You're out!" Hamric turned around in amazement and started protesting. After several minutes of argument, the umpire finally agreed that the pitcher had thrown only two balls, "but since I called you out I can't change my decision."

So Hamric became the first batter in history to go down on strikes on two pitches! (Delivered by Coach "Squibb" Wilson, of Fairmont State.)

NEVCO SCOREBOARDS FOR FOOTBALL



FOR BASKETBALL

The new Nevco model 6 football board and the model 150-W basketball board are two leaders in the Nevco line—built by a company that has taken the lead in scoreboard design and construction since 1934.

These are the scoreboards built today that you will want in your gym or on your field tomorrow. Remember, there is a Nevco board to fit your needs, and football orders should be placed NOW.

NEVCO ALWAYS LEADS

Write today for Bulletins Nos. 6, 14 and 16

NEVCO SCOREBOARD CO.

GREENVILLE

ILLINOIS



This man, H. "Red" Hastings, is compiling quite a football record at Austin (Minn.) High. Austin, a member of the Big 9 Conference, which is considered the strongest in the state, is currently enjoying a 22-game winning streak and has lost only one game in the last five years. In the 12 years that Hastings has been at the helm, Austin has captured the conference title six times and finished second the other years. They've been state champs twice—in 1947 and last season.

The National Assn. of Approved Basketball Officials is now seriously considering the addition of a secret service. The following letter will tell you why. "Gentlemen: I have not received my membership card for 1950-51. However, I recently received a letter from Joseph Suarez, detective, 23rd Squad, New York City, in which he states that I should contact him immediately. It seems that my association card, #6425, was found on a man apprehended for larceny. I would like to know how this card got into the possession of another person, since I had never received it in the first place."

The letter was answered by Irwin Klein, of the Westchester County (N. Y.) chapter of the Association. Klein rose to the occasion nobly. "I would like to explain how this fellow got your card," he wrote. "Since he has been apprehended for petty larceny, he must have been trying to work his way up to grand larceny in order to become a basketball official. You have to be accused of grand larceny before earning your spurs as a basketball official."

Wasn't that Michigan-Ohio State game a farce? It's hard to understand why they even attempted to play it. Played on a snow-carpeted field in the teeth of a howling blizzard, with every marker completely obliterated,

the game was a mockery. The players had to wear long underwear underneath their suits, girdle hip pads, gloves, stockings, and tennis shoes.

The statistics were positively weird. Michigan, the winners, didn't make a first down! They didn't complete a pass and gained a total of 27 yards. Ohio State made three first downs and gained a total of 41 yards. The two teams booted 45 times! In fact, Chuck Ortmann won the game with his incredible punting. Eleven times out of 24 tries he punted out of bounds inside the Ohio 15-yard line!

Two bits of quick thinking produced the Michigan victory. With less than a minute remaining of the first half, Ortmann punted out on Ohio's 8. The Buckeyes attempted to run out the clock, but after each play Michigan called time out. Ohio was finally forced to kick with 20 seconds to go. The kick was blocked and fallen upon in the end zone for the game's only t.d.

The other stratagem involved the gloves worn by Ortmann. This was strictly Coach Oosterbaan's idea. He dug up a pair of dainty tight-fitting ladies' gloves for Chuck. Even when they got wet, they fit skin-tight and gave Ortmann a perfect grip on the ball. Consequently, he didn't have to worry about fumbling the ball on all those punts.

It was a helluva game for Ohio State to lose—and a great one for Michigan to win.

Hear about Herman Hickman's new three-platoon system? One is for offense, one is for defense, and one is for studying.

Our beanie is off to Al Rosen, the slugging Cleveland third-sacker. Upon hearing that his home town, Miami, Fla., was preparing a two-day celebration for him, he called from Cleveland and said he was "amazed and deeply appreciative" but that he thought a fund being collected for him could be put to better use.

"I don't really need the money," he said. "If you feel you must do something for me, then continue to raise the money and give it to the Variety Children's Hospital. They can use it, and having a part in such a project would give me more satisfaction than any gift you could buy."

Stout Steve Owen, coach of the N. Y. Giants, had the poorest season of his career in 1947. But he never lost his sense of humor—at least off the field. After the roof fell in on his team against the Steelers, he was asked: "Say, Steve, when is your team going to get hot?"

"I'll let you in on a secret," he retorted. "It will be next July when they come into the office to talk about next season's salary."

Fleeting Fame Dept. Joe Borden, who pitched the first no-run no-hit game on July 28, 1875, wound up the next season as a groundkeeper.

Ozite GYM MAT FELT IS...
SAFE! because

OZITE is guaranteed to be 100% free from broken needles and other foreign matter which could cause serious injuries. And, in addition, it is thoroughly sterilized.

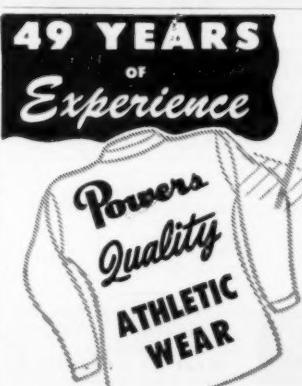
RESILIENT Genuine OZITE all-hair felt stays resilient longer. Laminated construction provides a firm, yet springy cushion that protects against injury.

OZITE Gym Mat Felt DURABLE will not bunch, spread or pack down—stands up under hard usage and retains its cushioning qualities throughout the life of the mat.

ECONOMICAL OZITE Gym Mat filler lasts longer because the hair fibre is practically indestructible. Its long-lived economy, plus absolute safety, make it your best buy.

Specify Genuine OZITE Gym Mat Felt as the filler the next time you order mats for your gymnasium. For further information, write to Dept. PII.

AMERICAN HAIR & FELT COMPANY
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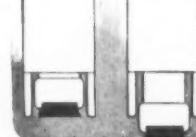
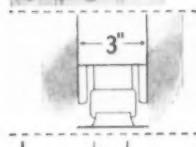
• The finest wools and Skinner's satins and rayons go into Powers athletic uniforms to make styles for champions.
• BUY POWERS for appearance, tailoring and wear.
Write for new catalogs.

THE POWERS
MANUFACTURING COMPANY
WATERLOO, IOWA

School Architects
specify...
Boards of Education
demand...



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OPERATING LOCKED

See an R-W FoldeR-Way Automatic Partition in operation at any of the schools in the partial list at right, or write for address of installation nearest you.

- 1. Fully Automatic.** All folding, unfolding, locking, unlocking, and sound-proofing operations are accomplished by the electric operator and its auxiliary mechanism. You turn the switch key—R-W does the rest.

- 2. Positive, Silent Action Roller Chain Drive.** Will not slip, stretch, or break.

- 3. Friction-Proof Track.** Ball-bearing hanger wheels are machined to provide a line contact with the $\frac{3}{8}$ " round cold-rolled steel bar runways of the track, assuring minimum friction and silent operation.

- 4. Gymnasium Doors Are Full Three Inches Thick Over Entire Area.** This provides flush surface similar to a solid wall. Eliminates protruding butt-hinges in players' contact zone below seven foot level.

- 5. Fully Automatic Floor Seals.** Self-adjusting to uneven spots in floor. No levers or manual effort required to operate.

DON'T SPECULATE—investigate the advantages of FoldeR-Way Automatic Folding Partitions by Richards-Wilcox. Check the installation nearest to you. For details, telephone, write, or wire, today.

Kent State University, Kent, Ohio—Opening: 114' x 20'
Hinsdale Community High School, Hinsdale, Illinois—Opening: 127' x 28'
Arvin High School, Arvin, California—Opening: 143' x 26'
Kinkaid School Gymnasium, Houston, Texas—Opening: 71' x 21'
High School, Brookline, Mass.—2 Openings: 100' x 20' and 130' x 20'
Banks School, Bay City, Michigan—Opening: 50' x 18'

Richards-Wilcox Mfg. Co.

A DIVISION OF THE KODAK COMPANY
AURORA ILLINOIS U.S.A. + Branches in all principal cities



De Luxe Plant

(Continued from page 9)

enlarges the capacity for reflective thinking, and develops skills useful to the continuance of this form of education.

"A modern physical education program," the speaker said, "provides for the dub and the expert, the ordinary guy and the all-American, and neither may claim more than his share of what the state has provided."

"Physical education believes in providing opportunity for all to achieve success according to his lights, and thus through his own efforts attain happiness. It seeks joy, fun, contentment, pleasure."

"Thus, its games should be conducted in an atmosphere of friendly rivalry in which the values derived are from the game and not from the anguish of the defeated opponent."

Included in the \$1,330,000 total cost of the structure were: general contract, \$924,867; plumbing, \$107,131; heating and ventilating, \$162,767; electrical, \$50,166; and elevators (dumbwaiter type), \$4,452.

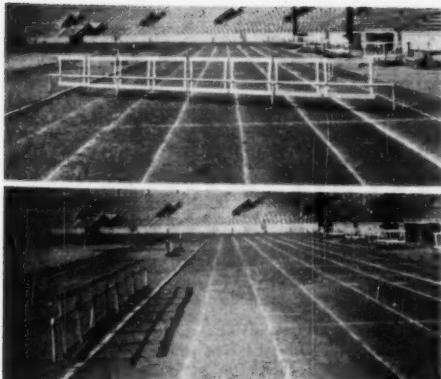
With the addition of the new facilities, Wills gymnasium will be used almost entirely for women's physical education activities.

The physical education program aims at appreciation, understanding, and plenty of opportunities for experiencing the making of ethical judgments associated with sport and play in a democratic society.

An average of 44 hours of activity in 21 different courses is being offered this year. This includes general conditioning, individual physical education, archery, badminton, basketball, beginning bowling and golf, bowling, golf, social and square dance, softball, beginning swimming, intermediate swimming, tennis, track, volleyball, fly and bait casting, touch football, tumbling and apparatus, wrestling, life saving, and the water safety instructor's course.

Intramural athletics offer a carefully planned program of competitive sports for the average student who participates for enjoyment and recreation. While inadequate facilities have limited activities in the past, more than 2,800 students participated in 15 different intramural programs the past two years.

This included 75 teams in basketball, 58 in softball, 40 in table tennis, 38 in touch football, 23 in bowling and volleyball, and 11 each in badminton, tennis, swimming, and wrestling. Other intramural sports include golf, bait casting, riflery, and foul shooting.



One-Piece Eight-Unit Hurdle

CONSTANT complaint from coaches of the time lost and labor involved in setting up and removing hurdles from the eight-lane track at Public Schools Stadium, the center of track activity in St. Louis, set Charley Desselman, chief of maintenance at the field, to the task of devising a one-piece hurdle that one man could move in a matter of seconds.

This device became an actuality last spring. Made of tubular aluminum throughout, it meets the standard requirements and can be used

for both high and low hurdling events.

The hurdle is set in a sleeve in the ground at one side of the track. When not in use, it can be swung around from the track to form a barrier to keep spectators and other runners off the track while races are going on.

As a time-saving device, the one-piece hurdle is a godsend. Where it used to take a crew more than 20 minutes to move the conventional 80 wooden hurdles from the eight-lane track for the 200-yard low-hurdle

race, it now takes only two men less than five minutes to move the eight hurdles that cover all the lanes. Supports are used for every two lanes, making the device easy to move.

The entire piece weighs only 105 pounds, and can be adapted to eight, six, and four-lane tracks, either outdoors or indoors.

The new hurdle is definitely safer than the old. There is less chance of an athlete tangling up in the hurdle, and it will not swing around to hit the boy if he should strike it with his foot.

The hurdle was tested in dual meets by local schools, and came through with flying colors. There were no mishaps. Coaches have offered suggestions for improvement, and it is possible that the center bar on which the eight single hurdles swing, may be lowered.

**★ Preserve
★ Protect
★ Beautify.... GYM FLOORS**

With This Easy, Proven 1-2-3 Treatment

1 SEAL THE PORES OF THE FLOOR with PERMA-SEAL

PERMA-SEAL penetrates every pore in the wood and produces a permanent, hard, durable, non-porous floor seal — an ideal base for markings and top coatings. Made of Tung Oil and Phenolic Resin, non-streaking and odorless — PERMA-SEAL is easily applied with a lamb's wool applicator. Because it reduces the number of surface coats required, thus lowering the total finish cost, PERMA-SEAL is the perfect inexpensive gym floor primer.

Approved for heavy duty durability by Maple Flooring Manufacturers Association

2 APPLY A TOUGH DURABLE SURFACE with PERMA-GYM-SEAL

PERMA-GYM-SEAL, applied over PERMA-SEAL, provides the toughest, most durable surface known for floors. The Bakelite Resin and Tung Oil in PERMA-GYM-SEAL gives floors a resilient, crack-proof, non-slip, quick-stop transparent surface that resists rubber burns, scuffing, oil, grease, perspiration and most acids — even sub-zero temperatures and boiling water. PERMA-GYM-SEAL is easily applied and insures the finest possible protection for floors of wood, linoleum or cork.

Approved by Maple Flooring Manufacturers Association

3 KEEP THEM SAFE AND BEAUTIFUL with SKIDPROOF

SKIDPROOF transparent emulsified plastic top finish gives complete protection to PERMA-GYM-SEAL with a single application. Producing a hard, shining, non-skid, easy-to-maintain, durable safety surface, it protects against scuffing, wear or other surface damage. SKIDPROOF can be easily removed and reapplied in half the time usually required for gym floor cleaning . . . gives the appearance of a new floor seal job . . . and is ready for play in an hour. One gallon covers 2000 square feet. Use economical SKIDPROOF for keeping floors slip-proof, wear-proof and beautiful.

SKIDPROOF is Tested And Approved By Underwriters Laboratories

Write on school letterhead for Free brochure that tells how to easily keep floors safe and new.

CON-SOL Products
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CONSOLIDATED CHEMICAL LABORATORIES, INC.
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Processing Football Films

WHEN an outstanding football coach such as Carl Snavely frankly admits that he "didn't really know a thing about football" until he started using motion pictures, it is little wonder that most coaches now place so much reliance on them.

Yet it was only some two dozen years ago that films were introduced into coaching. Who pioneered their use is a question somewhat shrouded in mist. But we do know that as early as 1923, Lou Young was filming all of the U. of Pennsylvania games.

Inasmuch as the same year marked the introduction of 16-mm. motion-picture equipment for amateur use, it is likely that Young was the first coach to employ movies on a full-scale, every-game basis.

By modern standards, those early football pictures left much to be desired. The equipment lacked the scope of today's fine cameras with interchangeable lenses; film speeds were somewhat slower and the techniques of "shooting" were in their very infancy.

Yet then, as now, motion pictures offered the coach a priceless advantage—he could study each game again and again, following first one player, then another, discovering why one play was stopped in its tracks and another made good.

Most of the early motion pictures were taken and projected at a speed of 16 frames per second. "Slow motion"—effected when the taking speed is greater than the projection speed—was still a thing of the future.

Today, however, most coaches instruct their cameramen to shoot each game at 32 frames per second—twice standard projection speed. The advantage of this lies in the fact that such films effectively magnify time; each play remains on the screen twice as long as it did on the field.

The movement of the game is thus retained, but is decelerated to the point where fast-breaking plays may easily be studied. Add to this the fact that the coach can re-

verse his film to run over a play several times, or can stop the film to study a single frame, and it's easy to understand how movies permit him to pick up dozens of details which he could not possibly note when the play was in progress on the field itself.

Still another innovation for the coach is the use of color. Since color film lacks the speed of black-and-white—which makes the latter suitable for use in all weather—the utilization of color football films has been restricted somewhat by the season and by geography. But many coaches have found it easier to follow the game in color and prefer to use it whenever possible.

All these improvements, however, might have proved futile if the film processing had not been speeded up to the point where some coaches today are actually seeing each Saturday's game on the screen sometime Sunday evening.

Admittedly, such coaches have the good fortune to be located relatively near a motion-picture processing station or do their own processing. Yet by far the majority of coaches can screen their films no later than Monday, and only a relatively small percentage—either because of location or of limited transportation—are forced to wait as long as Tuesday.

To expedite such rapid screening, a special service is maintained by the Eastman Kodak Company throughout its processing stations. Instituted 15 years ago at the request of many coaches, this service is designed to give top priority to grid films and, in other seasons, coaching films on basketball, swimming, track, or baseball.

Through this special service, one-day processing is available for all motion pictures bearing the Kodak "Sports Film" label, supplied exclusively to coaches.

During the football season, the processing stations operate all day Sunday on the films of Saturday's

games. Black-and-white films received before noon on Sunday are en route back to the coach before midnight processed, spliced in the sequence indicated by the coach himself, and assembled on 400-foot reels for uninterrupted projection.

Kodachrome film requires somewhat longer, but even Kodachrome motion pictures received by noon on a typical fall Sunday will be on their way back within 24 hours.

The actual delivery of the films depends, of course, upon the time required for transportation from the site of the game to the processing station and then to the coach's office. This is partly a matter of distance and even more a matter of train and plane schedules.

Seven Kodak processing stations provide a coast-to-coast network. The West Coast and Mountain Region are serviced by stations in San Francisco and Hollywood; the Midwest by the Chicago station; the East by those at Flushing, L. I., and Rochester; the South by the Washington processing lab; and the Southwest by a new station opened this spring at Dallas.

Arrangements for one-day processing service are easily made through the nearest processing station prior to the season's start, and special "Sports Film" labels may be ordered through these stations.

These labels, a distinctive orange and black, enable the processing personnel quickly to select football or other coaching films from the thousands of motion-picture cartons that the laboratory receives every day. Only through this special marking can the coaching films be routed for special service at the station.

Once the labels are ordered, the coaching staff should contact its nearest postal authority, bus line, or air or railway express agency, to determine the fastest possible schedule to and from the processing station.

Comparative schedules should be worked out, and arrangements may be made to pick up the film on arrival, without awaiting delivery.

Special plans should be made regarding the games played away from home.

The care with which such arrangements are worked out will pay off in prompter service. For quick processing is only half the battle—the other half is getting the films back by the quickest method. And the processing laboratory follows the coach's instructions regarding the return of such films.

In some cases, this may mean the use of air mail and special delivery service. Where this is requested, the processing station should be fully informed and the necessary postage included with the films.

In other cases, films may be returned via air or rail express collect. Here it may be preferable to have the films picked up at the airport or railway station. Although the coach may not have the built-in projector in his car that he is always dreaming about, he always has an assistant manager to chase out to the airport at plane time.

Massillon's Stadium

(Continued from page 32)

Field drainage—herring bone, with a drain tile every 25 feet.

Team rooms (home team)—
Locker, medical, and shower room
—44' x 48'.

Individual lockers—18" x 24" x 6'.
Coaches' office—16' x 22'.
Conference room—22' x 43'.
Equipment room—22' x 24'.

Team room (visiting), locker and showers—22' x 48'.

West press box, thermostatically controlled, six telegraphic outlets—74' x 6'.

East press box—18' x 6'.

Four radio booths—40' x 6'.

Officials' room—20' x 24'.

Lavatories—men's and women's, each side of field—20' x 24'.

Ticket offices—west, south, and east sides.

Two-stall garage and tool building—20' x 30'.

Storage building—40' x 60'.

Number of employees per game—300.

Adult season tickets—from \$8.00 to \$10.50, depending upon location.
Adult reserved seats per game—\$1.25.

Adult general admission—75¢.

Student season ticket—\$2.

Students general admission—50¢.

Proceeds from the gridiron, as with all other school activities, are placed in a general fund out of which all extra-curricular activities are financed.

*The finish
for Champions*



The famous portable basketball floor at Madison Square Garden . . . one of more than 15,000 courts finished with Hillyard's STAR GYM.

STAR GYM FINISH

QUESTIONS AND ANSWERS FOR COACHES

These frequently-asked questions cover the most important considerations in selecting a finish for your gym floor. In each case the right answer is Hillyard's STAR GYM . . . the finest finish ever made especially for gym floors.

Will it Work on Your Floors?

Star Gym Finish works perfectly on all types of wooden gym floors—maple, fir, beech and pine.

Is it Easy to Use?

Yes! Star Gym Finish spreads on quickly. Any custodian can apply it

with sheepskin applicator. Easy, economical to maintain.

Why Do Coaches Prefer it?

Because Star Gym Finish is tough, non-skid, no glare. Does not rubber burn. Forms a smooth, hard surface for fast, accurate play.

How Can You Have a STAR GYM FLOOR?

Consult your nearest HILLYARD "Maintainer" for expert advice on how to buy and apply Star Gym Finish. No charge—just call, write or wire for name of your nearest "Maintainer."



St. Joseph, Missouri
U.S.A.

Dow-Metal Crossbars For Pole Vaulting, High Jumping

- Meet all official specifications.
- Last 3 years or longer.
- Uniform all the way across.
- No danger of splintering.
- Painted in alternate black and white stripes.
- Cost less per season.

14' (jumping)	2.2 lbs.	\$6.75
16' (vaulting)	2.6 lbs.	7.50

50¢ higher west of the Rockies
Prices subject to change without notice

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Please send me a free copy of "Aces in Action."	
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Single or Double Action
One revolution in 3 seconds.

Send for catalogue 1950SC illustrating complete line of Stopwatches, particularly:

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1/100 SECOND, ONE REVOLUTION PER SECOND, AN EXCLUSIVE MINERVA MODEL WITH UNBREAKABLE AND RUSTPROOF COIL SPRING MECHANISM, a feature found on no other timer. Specialists in repairing all makes.

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DEPT. SC

THE ALUMINUM SPILL-PROOF HURDLE



**Planned for Economy
Designed for Safety**

- Takes hazard out of hurdling; no more dangerous heel or ankle injuries; no costly spills.
- No costly maintenance required; reduces manpower needed to handle, set up, and store hurdles.
- Telescoping tubes lock quickly and firmly to heights of 30, 36, 39, and 42 inches.
- Resistance of 8 lbs., automatically set into position with each hurdling height.
- Meets all specifications.

PRICES

\$16.95 (self-adjusting weights)
\$18.95 (automatically adjusted wts.)

Order Now to Insure Delivery

PENNA. HARDWARE CO.
2522 Haverford Rd. Ardmore, Pa.

Modern Stadium Design

(Continued from page 11)

The public address is a Bell system with a peak audio output of 85 watts. The system uses only a third of its output to cover the stadium. It has three microphone inputs with one for phonograph, and employs two four-foot University reflex trumpets mounted on the forward corners of the press box roof.

These speakers have a 60-cycle cut-off which gives a high tonal range, and the amplifier has a treble and bass control. The speakers are rated at 30 watts with a peak output of 45 watts.

There are facilities for three microphones on the field. Outputs are located in the concrete forward wall of the west stand. One is at each of the 25-yard lines with the other at the 50-yard stripe. During any type of program in the stadium, microphones can carry speeches or music from the press box or anywhere on the field.

The microphones are of both high and low impedance and can use up to 800 feet of line on low impedance. Thus a microphone can work effectively from any point on the field. All microphone lines are of the shielded type to prevent pick-up and hum.

Along with the microphone outputs are three sound-powered telephone outlets. Personnel in the public address booth control these lines, and all three may operate together or individually.

One line is used in a direct hook-up between a spotter in the press box and one of the coaches on the home bench. Spotters on the field use the other two. One covers the kick-off while the other handles the action at the receiving end of the field.

During a game, one spotter reports yards, downs, and players involved in action from the goal line to the 50-yard line. The spotter at the other end of the field makes similar reports to the press box when the play is on his half of the field.

The use of two phones in this manner on the field facilitates the reports and eliminates considerable running up and down the sideline. There are also three spare lines on the field so that the system may be increased for telephone, broadcast, or public address use.

The radio booth has two broadcast lines, an outside line and a local line for the home station, WHFB-FM.

The lines are sufficiently versatile so that sportscasters may broadcast direct from the field or from the booth in the press box.

A patch panel in the public address booth controls all lines and permits the interchanging of lines.

There is also a telephone in the press box, on which long-distance or local calls can be made. By the push of a button, this same phone may be used to connect the press box with the home dressing room.

Power comes into the stadium underground and leads up the west wall through a two-inch conduit into the public address booth.

DURING the past football season, visiting coaches, players, and officials found cause to exclaim over the excellent dressing room facilities in St. Joseph (Mich.) High School's new stadium.

Although workmen still had finishing touches to put on the rooms, visitors found words of praise for the spacious dressing quarters, their arrangement, and the heating and ventilating systems.

A large main entrance, centered in the west stand, separates the home dressing room from the visiting team dressing room, public toilets, janitor's room, and utility room.

A cinder concourse runs the length of the stand, separating these rooms from the large concession booth opposite the entrance and the four dormitories which provide access to seats in the all-steel stand.

The rooms are constructed of concrete block, and all partitions are of four-inch block. The block on the street side is faced with blond brick. Eight-inch glass block, located just under roof level and five rows in height, furnishes light to all rooms from the main entrance of the stand to its ends. The glass block, combined with the brick, provides a modern touch and pleasing appearance to the stadium.

The home dressing room is 73 ft. 10 in. long and 23 ft. 10 in. wide. A large equipment room and shower room are located at the south end of the dressing room.

The equipment room is 20 ft. 6 in. by 15 ft. 10 in. and is separated from the dressing room by a wire mesh partition. Equipment racks line the walls, and steel pipes overhead hold large metal hangers on which the managers suspend all game and

practice equipment, assuring adequate circulation and quick drying of uniforms.

A section of the wire partition is hinged and swings open over a large counter. Managers issue and take in all equipment over this counter at each practice session and game.

The shower room, with a small drying room, is 20 ft. 6 in. by 8 ft. The walls are of tile block, and the room contains nine shower heads. All showers are of the self-regulating type.

The shower room and drying room each have a floor drain. Four-inch concrete curbs separate the two rooms, and the drying room from the dressing room, preventing overflow of water and cutting to a minimum the amount of water tracked into the dressing room.

An electric power suction ventilator draws off any steam that may accumulate and prevents its floating into the outer rooms.

Situated at the north end of the dressing room are a training room and a coaches office. The training room is 12 ft. 4 in. by 10 ft. 8 in., and has its own storage room. The coaches office is 10 ft. 6 in. by 9 ft. 4 in., and possesses an adjoining private toilet and shower.

The floor of the dressing room is of six-inch reinforced concrete. Permanent plank benches are secured to the floor with steel pipe risers and six-inch steel flanges.

Four doors permit access to the dressing room. One, just inside the man entrance, opens into the equipment room. Another opens from the concourse into the training room.

The two other doors are at the north end of the stand, one opening into the coaches office and the other entering directly into the dressing room.

The visiting team dressing room is at the south end of the stand. This room is 46 ft. 6 in. long and 23 ft. 10 in. wide. A shower room, 16 ft. by 8 ft., is at the north end of the room. It features nine shower heads plus a suction ventilator.

Plank benches are secured to the concrete floor in the same manner as those in the home team dressing room.

At the present time, the players hang their street clothes on metal hooks and hangers secured to the walls of the dressing room. In the future, however, the visiting team will have 58 wall lockers. Players in the home team room check their street clothes into the equipment room or hang them on wall hooks.

Both dressing rooms have 39 in. by 14 in. window ventilators set in the glass block windows, which open outward to provide ventilation.

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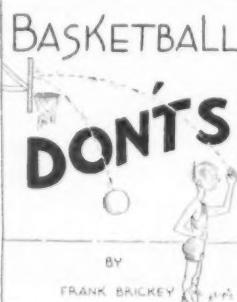
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New Books on the Sport Shelf

- **HOLMAN ON BASKETBALL.** By Nat Holman. Pp. 323. Illustrated—photos and diagrams. New York: Crown Publishers. \$3.

THE greatest basketball technician of all time, a man equally at ease with the spoken and written word, Nat Holman is ideally qualified to write on the game. And if you want any proof, just grab hold of his latest book. You won't have to get much past the opening tap to realize you are reading the greatest technical text on basketball ever written.

The great City College coach lets go with all the weapons in his formidable arsenal. His incredible store of knowledge and his remarkable analytical ability are put to perfect use. He analyzes the entire game, illuminating every detail vividly and practically.

He starts with the fundamentals, covering individual offense, passing, dribbling, shooting, and individual defense. These are not cut-and-dried analyses. Holman has something new to say about each—some inside slant, some inside tip that makes the analysis doubly enriching.

The old Celtic then delves into team offense and defense, encompassing all the different types of coordinated patterns.

Offensively, he analyzes the spontaneous game, single pivot, rotating pivots, weaving, set offenses, fast break, and special plays. Defensively, he expounds the man-to-man, zone, all-court press, freezing, defense against the fast break, etc., as well as the offenses against these tactics.

As with his treatise on fundamentals, Holman analyzes these patterns thoroughly and refreshingly, adding a distinctive spice in each instance.

All of these analyses are brought to life with references to episodes involving the subject under discussion. This isn't just window trimming. Something of a practical nature can be gleaned from each story.

The text is further illuminated with 100 excellent diagrams and 300 photos. The photos are particularly noteworthy. All the basic techniques are illustrated with movie sequences taken from actual games! You see passes, shots, dribbles, defense, errors of commission and omission, etc., exactly as they are executed in big games.

The book is rounded out with an analysis of common mistakes (particularly valuable in that most of these mistakes are illustrated in actual game situations), and an extensive section on advice to young coaches.

The latter section will prove exceptionally valuable to beginners, inasmuch as it presents excellent guid-

ance in the selection of players, practice routines, substituting, scheduling, etc.

The book is a four-star beauty. Chalk up another remarkable achievement for "Mr. Basketball."

- **SPORTS EQUIPMENT (Selection, Care and Repair).** By Virginia Bourquard and Charles Heilman. Pp. 358. Illustrated—photos. New York: A. S. Barnes and Co. \$5.

EVERY school man and woman responsible for the purchase, use, and care of athletic equipment will enthusiastically welcome this compact and comprehensive reference source.

It answers all the vexing questions of what? how much? how long will it last? and how can it be made to last longer? for 22 sports.

The authors, both college administrators, have done a remarkable job of amassing the latest authoritative information on the subject.

They furnish precise descriptions of the construction, materials, standards, amounts needed, expected life, and proper care of both clothing and equipment for the following sports: Archery, baseball, softball, basketball, bowling, boxing, wrestling, fencing, field hockey, football, golf, ice hockey, lacrosse, tennis, badminton, squash, skiing, soccer, volleyball, handball, and track and field.

Anybody looking for a reliable guide to all matters pertaining to equipment, will find exactly what they're looking for in this superb text.

Miscellaneous

- **Body Control.** By Herman Gawer and Herbert Michelman. Pp. 134. Illustrated—drawings. New York: Crown Publishers. \$2. (An exercise program for building up, reducing, or strengthening every part of the body.)

- **Basketball for Girls (Revised).** By Wilhelmine E. Meissner and Elizabeth Yeend Meyers. Pp. 89. Illustrated—diagrams and drawings. New York: A. S. Barnes and Co. \$1.50. (Completely revised and rewritten.)

- **Flies.** By J. Edson Leonard. Pp. 340. Illustrated—drawings and photos. New York: A. S. Barnes and Co. \$5. (An encyclopedic treatment of origin, natural history, tying, hooks, patterns, and selection of dry and wet flies, nymphs, streamers, salmon flies for fresh and salt water, including a dictionary of 2200 fly patterns.)

- **Skeet and Trapshooting.** By Dick Shaughnessy with Tap Goodenough. Pp. 180. Illustrated—photos and drawings. New York: A. S. Barnes and Co. \$3.

Training Room

(Continued from page 24)

concerns the operation of the room. This is simple to solve. Moreover it provides you with an opportunity to give certain boys the biggest thrill of their high school careers.

Try to recall the avid rooters who, because of rheumatic hearts, lameness, polio afflictions, or other physical disability, could not participate in athletics but who loyally followed the team. These are the fellows who will do a job for you as student trainers and thank you for the opportunity to help the team.

To start with, pick one student trainer and two assistants. Upon graduation of the head trainer, move the assistants up according to ability. The progression from then on should be similar to that used for the team managers.

If your school awards a varsity letter and certificate to the managers, make sure to give the student trainer the same recognition.

You must assume that the student trainers know nothing about the care and prevention of athletic injuries (and in most cases they won't). A week's training course might be given to them. Invite the boys to your home for a discussion of strapping, massage, and the use of electrical equipment, winding up the evening over hot chocolate and cookies.

EASY LEARNING

You will find it necessary at first to work closely with the group, but you'll be amazed at how fast they will learn the limited duties they will be called upon to perform.

A wealth of excellent literature is available on training and training room procedure. Get this into their hands; they will devour it. And remember that high school boys like authority and like to feel they are filling a vital function.

Buy white jackets for them to wear while on duty, and give the trainer the complete run of "his" room (under your jurisdiction). One iron-clad rule must be enforced: No one may be treated without a slip from the coach. The trainer should also keep an accurate file on all persons treated.

No physical education plant can be considered complete without a good training room. If you don't have such a room, why not go to work on one today. You owe it to your athletes.



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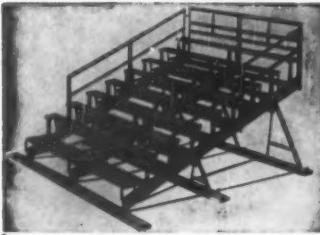
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National Federation NEWS

Edited by H. V. PORTER



WHILE college and independent groups have been protean in their choice of basketball officials' uniforms, the high school groups have maintained almost 100% uniformity in respect to the color of the official's shirt. Practically every high school group specifies the black-and-white striped shirt.

Insofar as the pants are concerned, some difference still exists. Grey is specified in some sections and black in others. At a recent meeting of the Ohio Assn., the district representatives voted unanimously to adhere to black-and-white striped shirts and grey pants.

The same costume is prescribed in Michigan and Illinois, as well as by the Western Conference. In the Missouri Valley area, it's customary for the officials to wear black pants with the black-and-white shirt.

Some degree of uniformity is desirable so that the teams may choose their game-suit colors with an eye toward the proper contrast between players and officials.

Track and Field. The new edition of the guide now being distributed, contains a few minor rule changes. The section on starting has been reworded to clarify the fact that lifting a hand or foot after the "set" position or before the pistol is fired, constitutes a foul.

A new situation-ruling gives the pole vault judge the right to catch the pole if there's a high wind and if the pole has been properly released. For college meets, the scratch line for the javelin throw will now be an arc instead of a straight line and the thrower's run will be in a marked alley. The high school scratch line remains the same.

Baseball. The Baseball Case Book Committee met in Chicago and authorized certain improvements both in the rules and the case books. Wherever possible, the rules provisions have been made to harmonize with the corresponding provisions in the professional game.

Six- and Eight-Man Football. The current six-man football rules appear quite satisfactory, and the efforts of the national committee will be aimed at bringing the 1951 code into harmony with whatever related changes are made in the 11-man code.

The eight-man game is practically the same as the 11-man game. No clear pass is required, and about the only difference from the regular game is that only five players are required on the scrimmage line.

Basketball Experimentation. Experimental groups are playing their games under certain supervised modifications, with the results being observed by representatives of the National Basketball Committee. Among these projects are the following:

1. One state-wide group specifies that all free throws must be attempted.

2. Another state-wide group is playing under a rule whereby each personal foul during the last three minutes will carry a penalty of two free throws unless a successful try for field goal is involved. All free throws must be attempted.

3. Other small groups are experimenting with a rule which will award the usual number of free throws, with the ball going to the throwing team if the last free throw is successful. If unsuccessful, the ball will remain in play.

4. Another experiment is with a modified rule which will permit three personal fouls for each half of the game. If a player is removed after three fouls in the first half, he may re-enter in the second half.

Safety Measures. The number of fatal injuries in football last season was lower than for the previous year. In 1949, the fatalities were approximately 1.33 per 100,000. In 1950, it was less than 1 per 100,000.

Compared to the fatalities in other groups, high school football shows the lowest incidence. Over a period of years, the average of fatalities per 100,000 is approximately 2 for collegiate football and higher for the sandlot game.

Another safety measure which is the responsibility of every athletic department, is the safeguarding of the participants' health. In a recent bulletin by Dr. Clair E. Turner, of the National Foundation for Infantile Paralysis, an account is given of a case in Crystal Lake, Ill., which demonstrated the effectiveness of proper attention in the case of an athlete stricken by polio.

Jerry Heiman had been a star athlete on the high school team when a polio attack put him out of action. Through proper diagnosis in the early stages and through proper early treatment, Jerry recovered sufficiently to participate in a limited way in the last basketball game of the season.

The case illustrates the effectiveness of frequent and careful physical examinations. If those in the athletic department will acquaint themselves with the proper danger signs of vari-

ous ailments, preventive measures can often forestall severe consequences.

The basketball season exposes many health problems. Unsanitary dressing rooms or playing areas are just as dangerous as poor equipment in football. The use of players who have not had a proper physical examination or whose vitality has been lowered by illness or other circumstances, is just as unwise as playing an immature, lightweight football team against an older, heavier team. Improperly heated and lighted gyms are also health hazards.

Home-Made Track Gear

(Continued from page 26)

Starting Blocks. One of the quickest ways of ruining a good track is to allow the competitors to dig holes for starting. Starting blocks eliminate this and also make for faster starts.

Our shop made us six starting blocks for less than the cost of one purchased retail. Again using scrap lumber of 2" by 6" variety, they were constructed through the ingenuity of our shop instructor.

They were likewise made on a production basis with all parts being cut before being assembled. The cross-piece can be adjusted to any length the runner desires by inserting the key in any one of the numerous holes along the main stem of the block.

The forward foot in the starting position is placed against the main stem of the block, with the rear feet resting against the cross-piece. It can be used by either right or left-footed starters.

Four iron pegs, one on each of the four corners of the block, anchor it to the ground. These blocks have been tested and used and have not been found wanting.

This article is not intended for the larger schools, who can easily appropriate the expenditures for the retail purchase of this equipment.

However, for schools of small enrollment and limited funds who desire to adequately compete in track, this offers a manner in which it can be done. The secret of this program to renovate track equipment lies in the fact that the cost is reduced by the use of school shop labor.

We are as proud of our home-made equipment as we would be were it purchased. The boys, likewise, have more than a usual interest in it, because they made it. We have found that it has helped stimulate interest in track, and know that it will help improve our conference track meet.

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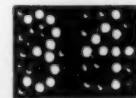
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(Continued from page 13)

ing of basketball. This year, as in football, we are having the coaches explain the boys' game, since that's the game the girls will be watching.

Because of the size of our classes, there is little opportunity to play actual games. No physical education class that has 12 people playing with 30 watching, is worthy of its name. The girls really interested in the sport may participate in the after-school program.

Another part of the girls' program is devoted to the various recreational activities. After all, how many high school girls will play much basketball or field hockey after they leave school?

In the recreational period, we promote the activities they can play in later life, such as badminton, table tennis, peteketrio, and deck tennis. Naturally, we also cover volleyball and softball.

Some time during the term, we offer tumbling and apparatus work. Our plastic-covered mats are most satisfactory. They are much easier to keep clean and cause fewer mat burns than the conventional canvas-covered mat.

This gives you a picture of our classwork. The activities we can't cover in class are handled during the after-school period.

In the fall, you may see one group head for field hockey, another for soccer, another for tennis, and still another group for swimming at the Y.W. Bowling at the public alleys also is an important activity.

During the winter, you will see eager girls playing intramural basketball; the next night you are apt to find some 100 girls working on modern dance. Last year the dance group gave several public demonstrations. And mention should also be made of the cheerleaders who are always working madly in one of the gyms.

The rest of the after-school program coincides pretty closely with the class schedule. The class is like a laboratory period, with the after-school program being the proving ground.

Since the girls don't have varsity teams, we stimulate interest with various play days, sports days, or invitation games. Awards based on a point system are given for after-school participation. Our point system still needs some adjustments,

but we feel that it is working fine.

The activity of which we're extremely proud and which we feel is perhaps the most beneficial to the boys and girls, both from the physical and social standpoints, is dancing.

During the fall we start square dancing, combining the boys and girls classes so that we may have between 100-200 in a group. All six instructors work these classes. One person does the instructing over our "couldn't-be-without" sound system, while the other five circulate giving personal assistance where needed.

This section has grown and has become so well accepted that the first question on the opening day of school often is, "When does square dancing start?"

Social dancing is administered in much the same manner. A class may consist of waltz, fox-trot, polka, or even rhumba.

One of our students recently summed up the interest in dancing in this fashion: "The first year it was like pulling teeth to get the boys out. The next year they began to slick their hair before class. And this year they don't even bother about that."

BOYS' PROGRAM

The boys start the fall with football; and during a class period you may see them working on line stance, charging, passing, receiving, punting, etc.

When basketball rolls around, they switch to the hoop game. We are fortunate in having ample baskets so that every boy can get a great deal of practice in shooting. The squad work in class also gives the boys a chance to work on passing, receiving, pivots, and many of the other basic fundamentals.

Last year, for the first time in our history, wrestling was introduced as a unit of the class work. A program of simple holds and breaks were taught to every boy in each gym class. It worked so well that we had eliminations in the different weights and formed a varsity. We felt that every one of our boys derived a great deal out of the sport, regardless of age, weight, or size.

For apparatus work, we have three of the best equipped gyms in our section. We possess 4 parallel bars, 4 high bars, 3 trampolines, 3

sets of flying rings, 3 sets of traveling rings, 2 Swedish vaulting boxes, 3 springboards, and forty 5 ft. by 10 ft. mats.

Because of this wealth of equipment, we do a great deal of apparatus work, starting with the simple exercises on every piece and gradually working up to the more advanced combinations. A natural off-shoot of this work is a gymnastics team that performs for clubs, schools, and between the halves of varsity basketball games.

An intensive teaching unit is devoted to volleyball, badminton, and table tennis, with tournaments in all three being held after school.

BASEBALL AND TRACK

Baseball fundamentals such as pitching, catching, fielding, etc., are covered only briefly, since it is difficult to do much with baseball inside.

The teaching of sprints, starts, and running form takes up a good part of the spring training period. The form for the field events is taught with medicine balls, softballs, and the like. Some coaches may feel that this is a waste of time and effort, but we believe it has merit.

Throughout the year, we also exhibit motion pictures of various sports to encourage participation and broaden the students' knowledge and interest.

Our varsity program is exceptionally heavy, almost more than a three-man staff can handle.

During the fall, we offer varsity, junior varsity, and freshmen football as well as cross-country. In the winter, there are varsity, junior varsity, and freshmen basketball teams; and teams in gymnastics, wrestling, and swimming. Spring brings out the varsity and jayvee baseball teams, the varsity and freshman track teams, and the tennis and golf teams.

Another important feature of our school plant is its use by outside agencies on week nights. For example, the City of Utica Recreation Dept. runs community center basketball two nights a week, while the Utica College basketball team practices on two other nights. Utica College also plays its home games in our gym on the nights that the high school team is away.

Besides these scheduled activities, the gym is also the center of a small college tournament in basketball and a winter sports carnival which includes badminton, volleyball, wrestling, gymnastics, etc. Ordinarily, the finals and semi-finals of our sectional basketball tourney are also conducted here.

In every school program, there are

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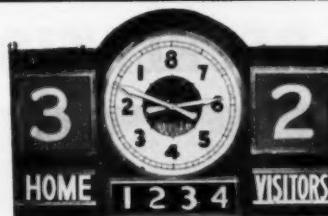
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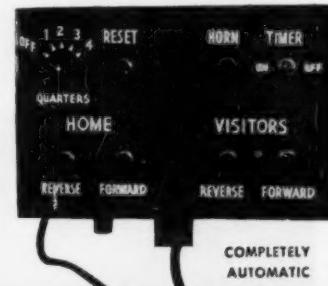
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always some adjustments you'd like to make and some features which are particularly outstanding.

Here are the things about our gym we feel are outstanding:

1. The size—135 ft. by 93 ft.

2. Electrically operated doors to divide the main gym into three gyms.

You may be interested to know that the students observe a definite route in approaching the gym. The boys enter and leave from the south wing of the main school building, while the girls follow a northern route to their locker room and gym section.

3. Wonderful equipment of all kinds, with enough apparatus to set up three complete gyms.

4. A unique sound system that makes it possible to use the amplifier in one gym for dancing while cutting off the sound in the other two.

5. Centrally controlled showers.

6. Clean towels for each class.

Insofar as the apparatus is concerned, we use the high bars, parallel bars, mats, and the trampolines the most; and the Swedish vaulting boxes the least.

PRACTICAL SUGGESTIONS

Now for a few things which we have learned from experience:

1. Be sure to include MORE than adequate storage space for your equipment—for you will always be adding to your original supplies.

2. See that the storage spaces are attached directly to the gym.

3. Be sure that there is wall space, so that flying apparatus may be controlled from the floor, not from the top of the bleachers.

4. Include individual as well as gang showers. This is extremely important where there is an after-school program, unless you have a full-time locker room attendant.

5. It is also very advantageous to have the physical director's office directly off the gym floor.

6. By all means, have play fields immediately accessible.

As you may see, the Utica Dream Gym is really being used to its capacity during school hours, after school, and every evening. We sincerely hope that this article has been of some interest and help to you teachers and administrators.

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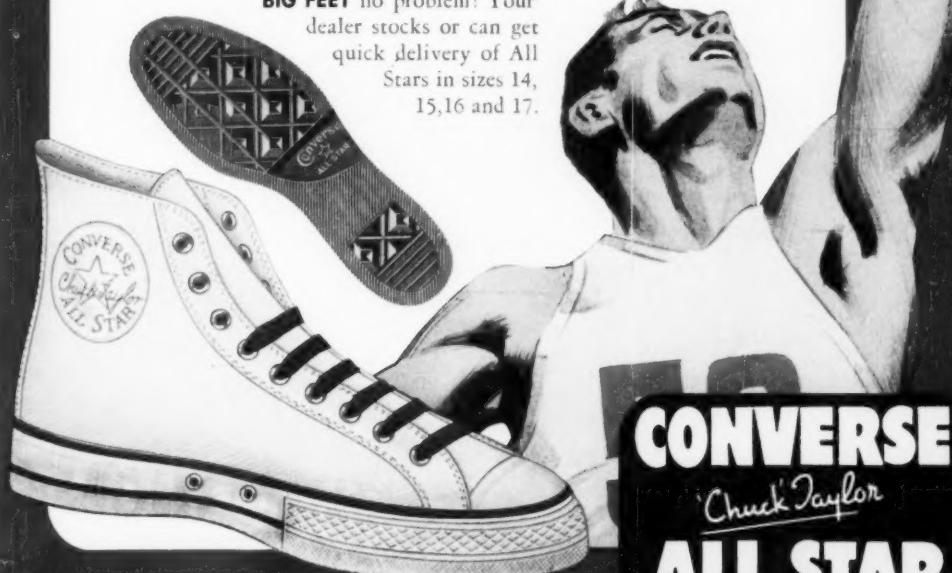
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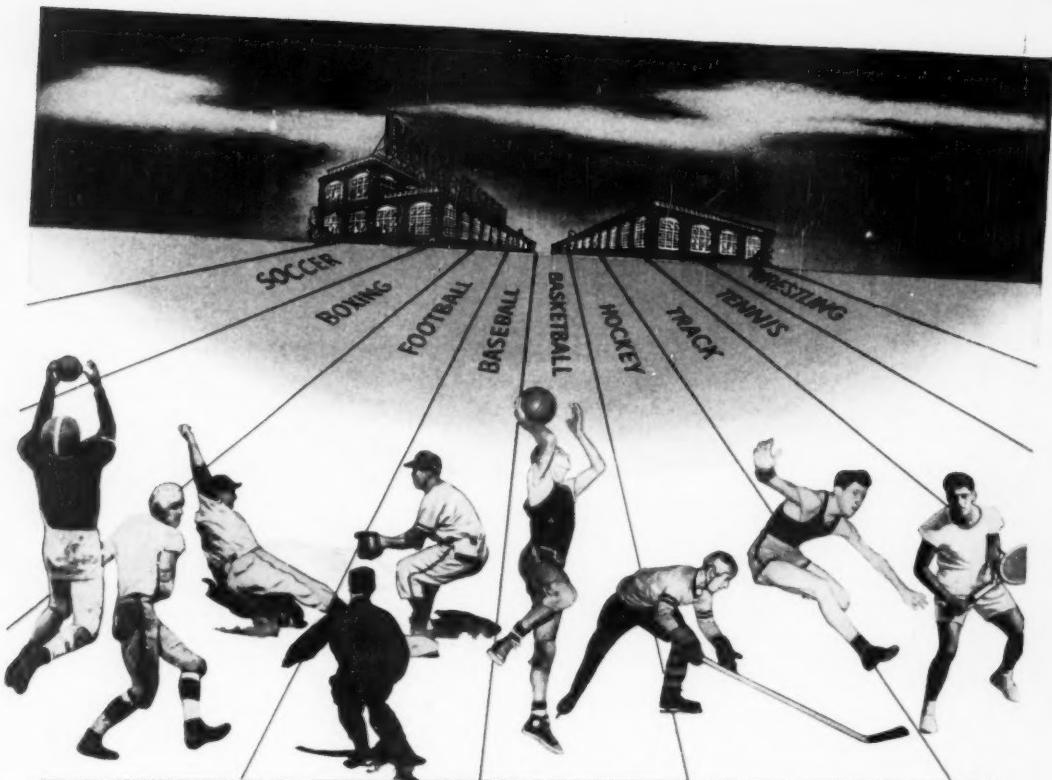
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